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CEO2CIO

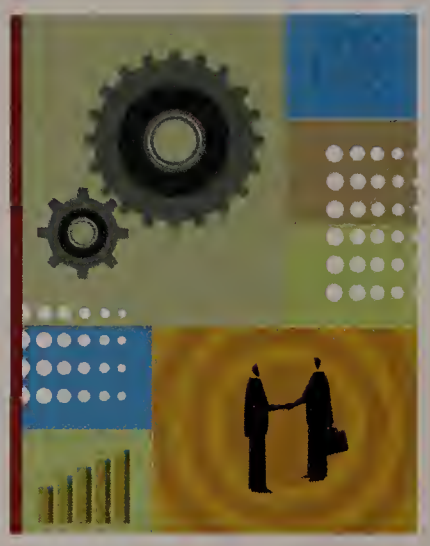
Today's IT Leaders on Market Trends

Efficiently Aligning Your IT Labor with Business Needs

Attention to Detail Under BSM Focuses Labor on Top Issues

CIOs are often challenged by critical issues such as controlling costs and maximizing business impact—challenges even under the best economic circumstances—when it comes to IT labor.

When hard-to-find, highly skilled IT professionals have to spend their time on mundane operational activities, fixing new problems caused by human errors, or on reinventing solutions to system glitches, they have less time for working on business-critical projects. Equally problematic: When those same professionals don't have insight into the business's strategic vision, they cannot prioritize projects and new processes. That can have big implications for the business's ability to serve customers and grow revenue.



Business service management (BSM) directly addresses the IT labor quandary, putting IT labor into context for an organization. Businesses that subscribe to a BSM approach are able to consolidate information about the cost of IT services in one location and get visibility into information about IT projects and IT services in a single system of record. BSM helps IT organizations focus labor resources so that staff works on the issues most in line with what business leaders require.

That plays out in multiple ways. First, IT work is prioritized according to business needs, so the most important service gets IT's attention first. Second, BSM also enables the automation of routine services, such as mass configuration updates. This reduces the risk of individuals introducing errors that can lead to network outages or other problems. It also enables policy-driven workflow responses that can shorten mean time to recovery (MTTR) and frees personnel to focus on strategic projects that align with the business. Because BSM introduces process discipline into the picture, organizations can consistently address problems, generate efficiencies and drive predictable outcomes.

Creating Alignment

Today, IT labor accounts for about one-third of IT budgets, according to a new worldwide survey, "Aligning IT Labor with Business Needs," from IDG Research. This is in line with a recent Gartner Group report, which reports that 37 percent of the average IT budget is dedicated to personnel. In the IDG survey, more than three-quarters of all the respondents (77 percent) consider optimizing IT's use of labor during the next one to three years to be a critical priority.

Forty-two percent of the respondents say that IT operations' labor costs—which generally are not associated with helping the business generate growth or new revenues—are growing fast. Only 8 percent more respondents (for a total of 50 percent) see IT application development labor costs as show-

About CEO2CIO: This peer-based thought leadership program analyzes quantitative research and tests it via qualitative interviews with actual tech executives. The resulting executive insight is then disseminated via CXO's multimedia assets. To learn more about this program, please contact mavery@cxo.com.

ing the fastest growth. There's the disconnect: *Routine maintenance labor costs appear be growing nearly as fast as application development labor costs.* Significantly, as overall IT budgets remain flat, these growing IT operations costs further compress not just application development budgets but also any spending for innovation. Furthermore, considering that application development can be tied strongly to generating growth and revenue, one would expect to see strategic IT growth favoring application development. Some business leaders complain that IT needs to do a better job of managing those maintenance costs related to labor. A VP of business and financial services at a manufacturing company, for instance, wonders why staff continues to maintain an AS/400 even though applications have been moved off it. "I think that the baseline stuff takes up about 50 percent of their time and they should be looking at ways to reduce that," he says.

> "IF WE CAN AUTOMATE ROUTINE THINGS, WE CAN USE OUR IT PEOPLE TO HELP SOLVE BUSINESS PROBLEMS INSTEAD OF JUST IT PROBLEMS."
>
> —VP AND DEPUTY CIO OF A HEALTH CARE SERVICE PROVIDER

Backing up this point, most of the respondents claim that their effectiveness at aligning IT labor spending with business needs is mediocre. More than 50 percent of the respondents worldwide say they are only somewhat effective at this, and nearly another 10 percent admit to not being very effective at all.

Alignment and Efficiency Key To High-Value IT Projects

IT labor alignment and efficiency managed together provide visibility into metrics that show the level of infrastructure managed by each staffer, so CIOs can allocate resources to projects associated with the greatest returns. Even as IT faces flat or declining year-over-year budgets, business stakeholders will still have many demands. This makes using BSM a critical way for IT organizations to keep pace with demand when budgets cannot support adding more internal labor resources.

Among the approaches organizations see for aligning IT labor spending with business needs:

- Adopting the IT Infrastructure Library (ITIL) best practice framework
- Automating repeatable processes
- Using project or portfolio management processes

Nearly 40 percent of the respondents say a formalized portfolio management process to match IT supply with demand is a strategy they use to align IT labor spending with business needs. And over one-third of the respondents indicate that ITIL plays a critical or very important role in improving the alignment of IT labor spending with business needs. Leading BSM solutions help organizations implement the proven ITIL best practice framework, which helps map business terminology to IT terminology to create a common language among the two parties.

Just over one-half of the respondents report that automation plays a critical or very important role in improving the alignment of IT labor spending with business needs. "If we can automate routine things, we can use our IT people to help solve business problems instead of just IT problems," says a health care service provider VP and deputy CIO. Automation also drives further efficiencies in the form of more-predictable outcomes. That ultimately affects how IT labor gets deployed, too, because unpredictable—and unwanted—outcomes demand human intervention to resolve.

Moving to BSM

Organizations with the most confidence that BSM can help improve IT service delivery tend to be located outside the United States, according to the survey. But as interest grows, more companies will want to know how to best undertake a BSM strategy. There are many elements to BSM projects—service resource planning, service support, service assurance, service automation, and integrating IT management technologies for maximum value, for example. As organizations consider their BSM adoption plans, they will benefit from working with a solutions provider that offers both a modular and integrated approach to BSM as well as the consulting expertise to ensure that projects respond to the enterprise's most pressing needs.

BSM promises IT organizations a much needed way to manage IT—and IT labor—from the perspective of the business. As budgets get squeezed and business demands increase, that's a promise IT leaders want to see realized.

Go to www.bmc.com/ITLabor *to obtain a download of the white paper "Aligning IT Labor with Business Needs." Based on a major research survey by IDG Research Services, this paper draws on peer insights to help executives reap the benefits of BSM strategies.*

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State of the CIO 2009

CIOs must meet higher business expectations. Clockwise from the top: **Russ Bostick**, CIO, Conseco; **Jess Reed**, CIO, Geico; **Tim Young**, VP of I.T., Bright Horizons; **Barry Vandevier**, CIO, Sabre; **Robert Fort**, CIO Virgin Entertainment

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By Kim S. Nash

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By Carolyn Johnson and Elana Varon

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APPLIED INSIGHT Why a recession is a good time to prioritize IT spending choices and lay plans for future growth.

By Chris Howard

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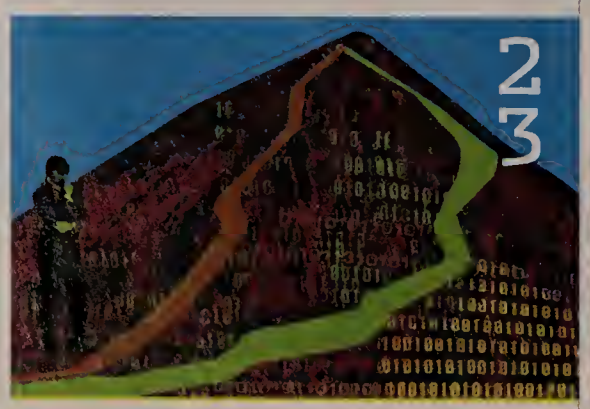

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[WINDOWS XP]

The Microsoft OS That Just Won't Die

Users' desire to stick with Windows XP combined with Microsoft's strategy of charging XP downgrade fees are keeping the software giant from moving forward, say industry analysts.

» www.cio.com/article/470595

[SECURITY]

TOP THREE ENTERPRISE RISK MANAGEMENT TRENDS

Cloud computing, service oriented architecture (SOA) and other rapidly emerging technologies are increasing the threats to data governance strategies. Knowing how the threats are changing is key to successful risk management planning.
www.cio.com/article/469567

[CAREERS]

SOFT SKILLS MORE IMPORTANT THAN EVER

News of a worsening economy, layoffs galore and slashed budgets make interpersonal skills and tending to employee morale more important than ever.

www.cio.com/article/459323

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How will Facebook (and social networks like it) make money? For all the pontificating and analysis, nobody yet has the answer. **advice.cio.com/c_g_lynch/would_you_pay_for_facebook**

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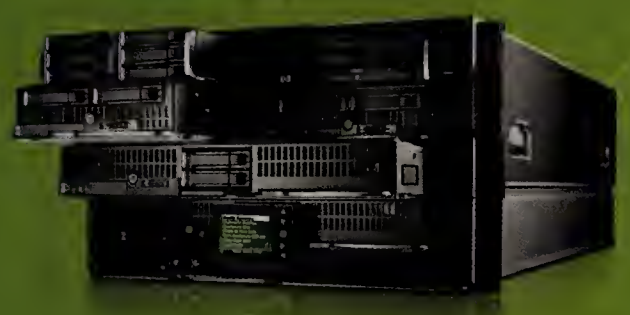

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New Year, New Start

A fond farewell to the readers of *CIO*

It is with mixed emotions that I write my last column as editor in chief of *CIO*. Being editor of the premiere magazine for chief information officers has been a tremendous experience. For the past 21 years, I've worked at one of the best publishing companies in the world (IDG) with some of the most talented people in journalism: strong leaders; smart, dedicated writers; thoughtful editors who never settle for less than the best; and amazing, creative designers. I've been honored to meet and serve the interests of thousands of CIOs—and anyone who has read my columns knows what a fan I am of them! I've had the opportunity to interview fascinating people, including Peter Drucker, Madeleine Albright and presidential candidates Wesley Clark and John McCain. I've worked on events with the likes of Sam Donaldson, Geoffrey Moore, Arthur Miller and Jonathan Zittrain. It's been a great ride.

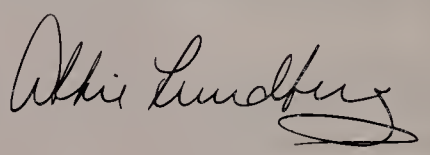
I've also had the creative joy of redesigning *CIO* from top to bottom not once but twice—first in 2000, and again this year. You'll see the fruits of that work in the March issue, and I hope you love it!

But things change; everything eventually comes to an end. Those who follow me on Twitter (@abbielundberg) know that my father recently passed away and my mother has been ill. My priorities right now are with her, and given the challenging economic times, *CIO* needs an editor who can focus on its success 150 percent.

Despite having been in one place for 21 years—something that astonishes me more than anyone—I've always believed that change is a positive. For the readers of *CIO*, that change will come in the form of a new editor in chief, Maryfran Johnson. I've worked with Maryfran for years: first when she was editor in chief of *Computerworld* (a sister publication at IDG) and most recently as editorial director of CXO Media's executive programs. Working with her has been a blast, and I couldn't leave the magazine in better hands.

Me, I'll be taking some time off to help my mother reorient her life without her husband of 58 years and to reorient my own without *CIO*. But as they say, this is not good-bye—just farewell for now. I'm certain I'll still be working with CIOs in some capacity, and I hope you'll all stay in touch.

Thank you for the trust you've shown the magazine over the years. We've tried to earn it every day, and I know that will continue. I wish you all the best.



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Time to Step Up

What to expect in 2009

I'm not sure how this year will shape up, but I know it won't be boring. Let's buckle up and see where this crazy ride will take us.

Sun sets: Passionate people, a ton of technology but one muddled value proposition. Time to go private and for Scott McNealy to return as CEO?

$800 billion=GRC: The massive bailout of the U.S. economy will bring with it demand for a lot more transparency. More governance, regulatory and compliance spending is a comin'.

CIOs grow or implode: CIOs will either step up and bring the right mix of business technology expertise to the executive suite OR scurry back to a traditional operational post. I'm betting on the former.

Google and Apple for business: Tough times cause dramatic change. Google apps and Macs/iPhones will penetrate the enterprise.

Web 2.0 shifts to Mobile 2.0: The computing power of ubiquitous mobile phones is growing exponentially. It will happen.

Data protection becomes top of mind: Customer loyalty will once again reign supreme, and that will put enormous pressure on every CIO to prevent data breaches. Unfortunately, some will fail.

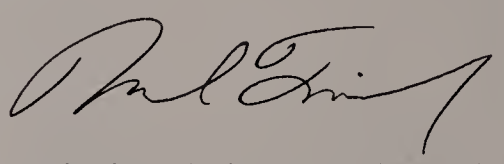
Risk-aversion trumps innovation: Based on the economy and CEO mind-set, CIOs will focus on security, reliability and scalability. Only the brave (or desperate) will innovate.

Infrastructure takes center stage: Based on numbers four and five, technology plays like consolidation, virtualization, green IT, dynamic cooling, management applications, storage and security will run the priority list.

IBM, HP, Microsoft, Cisco and Oracle lick their chops: CIOs continue to consolidate their vendors and demand higher value from them. Big vendors make more key acquisitions to round out their solution set.

Tech spending in 2009 will be negative: IDC, Gartner and Forrester have all reported downgrades to their IT spending forecasts. This could be the first time ever that IT spending experiences negative growth. Still, incredible opportunity as $600 billion is spent in the U.S. and $1.5 trillion across the globe.

We'll be there with you every step of the way.



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Today's IT Leaders on Market Trends

Manage Complex Apps with Ease

If a successful customer experience is critical to your business, then you need to ensure high levels of application performance and availability.

It is imperative that CIOs understand how their Web enterprise applications are performing and are able to quickly identify and resolve any issues. Lacking this insight can result in lost time, lost productivity, and lost customer revenue.

Fortunately, most CIOs recognize the urgency. A recent survey conducted by IDG Research Services found that U.S.-based senior IT leaders understand the importance of application performance:

- Two-thirds of the respondents report that monitoring and measuring end-user experience is extremely or very important.
- Sixty-nine percent indicate that understanding the user's experience when accessing online services is vital to long-term success.
- Eighty-two percent say that understanding the business impact of poorly performing customer transactions is extremely or very important.

> "We need to be able to track and monitor, so our applications need to be fully operational 24/7."
>
> —Rex Pruitt, MIS

However, success in these areas requires a high level of visibility into application performance. For example, Rex Pruitt, an MIS business analyst for U.S.-based PREMIER Bankcard, says his company's call center applications must perform optimally because they are a primary source of revenue.

"These are the applications that support our customers, whether they are calling inbound or outbound, so [the user experience] is critical," he says. "We need to be able to track and monitor, so our applications need to be fully operational 24/7."

Understanding APM Value

Monitoring and management are the cornerstones of a solid application performance management (APM) solution. By having instant visibility and control of the transactions that IT provides to outside users, CIOs can get a better grasp of the customer experience and what it means to the company.

"If you plot the criticality and complexity of an application, you can quickly see where to focus energy and resources," says Jeff Cobb, senior vice president of product strategy at CA Wily Technology, a leading provider of enterprise application management solutions. "Applications that are mission-critical and complex are the most important drivers for APM. The best way to measure criticality is in dollars associated with downtime—where a business knows how much a minute can cost."

U.S.-based CIOs clearly understand the value and benefits that a solid APM solution offers:

- Measured improvement of customer satisfaction (70 percent);
- The ability to quickly perform triage and root-cause analysis of application issues (67 percent);
- Closer alignment between IT and business because both can communicate with a common language around applications/data (56 percent);

About CIO2CIO: This peer-based thought leadership program analyzes quantitative research and tests it via qualitative interviews with actual CIOs. The resulting executive insight is then disseminated via CXO's multimedia assets. To learn more about CIO2CIO, please contact mavery@cxo.com.

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CIO 2 CIO

Today's IT Leaders on Market Trends

• Increased IT resource productivity because teams have more time to focus on new initiatives (53 percent).

Facing Challenges

Unfortunately, CIOs in the United States are struggling to implement APM solutions. Among the challenges they cite are a lack of APM market awareness in their organization (48 percent) and convincing management of return on investment (38 percent).

Part of the problem is the inability to define APM. In follow-up interviews, survey respondents' definitions ranged from "having everything up and running about 100 percent of the time in an acceptable measure" to "being compliant with our SLAs." Even when offered stock definitions of APM, as in the IDG survey, there is little agreement.

APM should serve as a powerful tool to manage the performance and availability of applications and customer experiences, with the ability to triage and diagnose issues when they occur. Yet this full realization dictates unwavering support within the organization, not an environment of uncertainty. Having a solid definition should help CIOs temper expectations and better understand how APM can provide relief to common business concerns.

When it comes to convincing management of the ROI associated with APM, an IT executive at a midsize acute care facility suggests that CIOs demonstrate to business executives that "if you don't do it, X will happen," even if the argument's foundation is based on a soft ROI.

Moving Toward Effectiveness

According to the IDG study, 51 percent of U.S.-based CIOs consider their organizations to be highly effective when resolving individual IT incidents and problems that affect application availability and performance. However, only 30 percent say their companies are extremely or very effective in managing the overall performance of their applications.

While the numbers show promise for APM, there is definitely room for improvement. Organizations simply cannot afford to lack visibility into, and control of, application performance across the organization and expect to be successful in their work to gain competitive advantage.

A robust APM solution provides visibility into silo-structured applications running across the IT environment while giving all of the stakeholders the control needed to address critical problems as they occur. The right solution enables IT to understand the underlying mapping of the transaction and ultimately make connections to determine the root cause of the issue.

So, for example, instead of people guessing why the shopping cart is not operating properly, a comprehensive APM solution pinpoints the root cause. The problem can then be quickly resolved, saving IT staff time and, ultimately, ensuring a positive customer experience.

To obtain a free download of this white paper *and results of IDG Research Services' Application Performance Management survey, which features 400 CIOs in the U.S., Europe and Asia-Pacific, go to CA Wily's CIO Solution Center at www.cio.com/solution-centers/ca. There, readers will also find more CA Wily white papers, video webcasts, and APM advice from the brightest CA Wily executives and customers. For more about APM and CA Wily, go to www.ca.com/apm.*

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Energy Star Coming to Servers in February

GREEN Looking for a server? Keep your eye out for the blue-and-white Energy Star label. The U.S. Environmental Protection Agency (EPA) has released a third draft of its Energy Star specification for servers and expects the final spec to be ready for use in February.

The specification aims to help customers identify the most power-efficient servers when making purchases. The Energy Star program already covers desktop PCs, monitors, light bulbs and other products. Products are identified with an Energy Star label.

The third draft establishes power consumption limits for when a server is in an idle state. To qualify for the Energy Star logo, vendors must also meet minimum requirements for power supply efficiency and publish a data sheet for each server indicating its power and performance levels for maximum, minimum and typical configurations.

The Energy Star specification covers servers with up to four processor sockets. The EPA excluded blade systems from the draft because the Standard Performance Evaluation Corp., a nonprofit that establishes benchmarks for high performance computers, indicated that its benchmark for measuring idle consumption can't run on blades. Future specifications will "look for appropriate ways to address blade systems," the EPA draft says.

The specification takes effect on Feb. 1. The idle power limits have been set at 60 watts for one-socket systems and 271 watts for four-socket systems. Additional components are given an additional power allowance. For example, a second hard drive gets an additional 15 watts of power.

–Agam Shah

The Cost of Conflict

WORKPLACE Full-time U.S. workers spend nearly three hours a week—or 3.5 work weeks per year—dealing with office conflict. If that isn't bad enough, consider that:

33% say that workplace clashes led to **personal injury or attacks.**

22% report that it has led to **illness or absence** from work.

10% report **project failure** as a direct result of conflict.

SOURCE: CPP

Repo Man

Continued from Page 15

IBM's Global Financing resells any gear that is repossessed because a customer defaults and "we can't work out a deal," Clarke says. IBM employees or third-party partners will physically take back the equipment, load it on trucks and bring it to one of IBM's 22 refurbishment centers.

Software, though, is not as tangible as a mainframe: It cannot be resold and has no collateral value. "Software is pretty much a loan," says Clarke. "There's nothing you can do with software once you've taken possession of it."

For software vendors, the repo recourse is of negligible value. Microsoft and its financing partners have few options to recoup a loss. So while the relationship with Microsoft will surely sour, the customer still has the usable software.

Clarke admits that retrieving the IBM software bundled in a "solutions" deal is a bit riskier than handling the hardware loans, but "we adjust for that risk based on the interest rates we charge." He stresses that IBM has "a very conservative approach to lending. " IBM Global Financing's default rate, according to its third-quarter earnings report, increased from 1.1 percent to 1.3 percent.

Forrester Research VP and principal analyst Ray Wang says technology loan defaults historically haven't been a big problem for vendors that offer financing options. Clarke says that "this is not an everyday occurrence for IBM."

In fact, IBM's Clarke says the financing division has seen an uptick in customer inquiries about financing options. "We are being more prudent in how we're lending, and we are definitely looking at credit quality of the customer set, which is something that we've always done," he says. "But we have money to lend."

–Thomas Wailgum

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Crisis Helps the Cloud to Rise

INTERNET The economic crisis may have a silver lining for IT companies that invest in cloud computing, as it will contribute to significant growth in that sector, according to research firm IDC.

Based on a survey of IT executives, CIOs and other business leaders, IDC (a sister company to *CIO* magazine) expects spending on IT cloud services to reach $42 billion by 2012—growth bolstered in part by the worldwide economic crisis.

"The cloud model offers a much cheaper way for businesses to acquire and use IT. In an economic downturn, the appeal of that cost advantage will be greatly magnified," says Frank Gens, senior vice president and chief analyst at IDC. "This advantage is especially important for small and medium businesses."

Aside from the economic crisis, three market forces are driving the shift to cloud computing and services, according to IDC. First is the search for growth and revenue in emerging markets in Brazil, Russia, India and China, as well as in the small and midsize business sector. Other factors are the shortcomings of traditional approaches in helping these markets increase IT revenue and competitive pressures from new players promoting the cloud-based business and IT model.

IDC differentiates between cloud services and cloud computing and is reporting sharp growth in both areas. It defines cloud services as both business and consumer services that people use over the Internet, and cloud computing as an emerging IT development, deployment and delivery model that enables real-time delivery of products and services over the Internet.

Cloud computing will capture 25 percent of IT spending growth in 2012 and nearly a third of growth in 2013, IDC predicts. By 2012, almost 10 percent of customer spending on IT will be on cloud offerings, including software as a service and cloud storage. While the definition for cloud services does include Web-based services from Google, Amazon.com and eBay, among others, it also includes any Web-based services that other companies will offer to engage easily with customers and partners, Gens says.

This in turn will spur growth in cloud computing, since these services need highly scalable, affordable and flexible IT infrastructure to support them, Gens says.

–Elizabeth Montalbano

CTO Role Becomes Broader, **More Strategic**

CAREER The chief technology officer role has evolved from one narrowly focused on engineering into one with broader, more strategic responsibilities, according to the CTOs of two major IT companies.

CTOs once were limited to engineering and research responsibilities, highly focused on technical issues, without much influence on broader business strategies. That, however, has been changing over the past 10 years, say CTOs.

Cisco CTO Padmasree Warrior's job includes traveling to many foreign countries to meet with clients and government policy makers to understand their technology needs and concerns. She also is tasked with identifying and analyzing new technology trends, industry changes and market transitions, and communicating her findings and conclusions to other Cisco executives and managers.

"My role is more now about thinking broadly across solutions," she said during a session at the Web 2.0 Summit in November.

She works closely as an advisor to Cisco's historically active M&A (mergers and acquisitions) group regarding what companies are truly innovating in areas that are important to Cisco.

Fellow CTO Shane Robison told a similar story about his role at Hewlett-Packard. "If I had to capture it in a word, I'd say 'strategy,'" Robison says. He and his team of business-unit CTOs look out for major technology and business trends. "[We then] develop a context in which we can make business decisions about where to invest and where to place our bets going forward," he says. This involves factoring in business, technology and market strategies, Robison adds.

The business unit CTOs relay those conclusions to the unit managers, who use them as a primary factor in HP's decision-making process for plans in areas such as business, product development and marketing.

–Juan Carlos Pérez

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ESSENTIAL

FROM INCEPTION TO IMPLEMENTATION—I.T. THAT MATTERS

technology

Paths to Compliance

BY JARINA D'AURIA

CIOs who seek to conquer this challenge are trying various routes—and tools—to help them achieve that goal

COMPLIANCE | As economic tough times continue, there's one thing companies can count on: more regulations. For the CIO and the IT department, that will mean more time spent grappling with and monitoring a seemingly endless (and growing) mountain of data related to compliance.

How pervasive is the challenge? Last May, the Information Systems Audit and Control Association (ISACA) surveyed more than 3,000 of its members and found that regulatory compliance ranked among the top-five business issues facing IT managers and executives. In its report, ISACA notes that "regulatory compliance still operates in a 'project mode' and has not yet been embedded in business processes."

CIOs who seek to conquer compliance issues have found various routes—and tools—to help them achieve that aim. Some have purchased governance, risk management and compliance (GRC) tools to automate the process of staying on top of rules and regulations. Others have combined products such as office suites or accounting software with strong governance and business process frameworks. Both methods can succeed in identifying compliance requirements and making sure your company is effectively following the rules. So which way should you go?

There is no black-and-white answer to the question. However, a company's size and the

ILLUSTRATION BY ANASTASIA VASILAKIS

scope of its operations can help guide the decision, says Forrester senior analyst Marc Othersen.

Make the Work Easier

A GRC tool can be an effective way to achieve compliance if your business is subject to many regulations and if the organization is spread out globally, says Othersen. Other countries have different regulations and industry standards, so a company with global operations has more rules to follow, he says. A tool can make it easier and more cost-effective for a company to comply with regulations wherever it does business.

Holly Marr, operations management organization leader at Acxiom, a global provider of information management solutions, started using CA's GRC Manager about six months ago to keep on top of approximately 900 compliance controls that the $1.4 billion company must abide by. "Our company has been learning how to manage the process [of compliance] in the most efficient way, and the tool is a way to go," she says.

Before the tool, internal auditors manually tested the controls for each regulation, which then had to be documented and sometimes remediated. However, all this information was housed in Excel spreadsheets and other documents that needed to be shipped to the internal auditors, regulators, upper management and regional offices to sign off on. Marr and her team chose CA's tool because it automatically helps them map industry-standard controls, such as the IT governance framework Cobit. It also consolidates the company's compliance data in one place. The amount of manual work required to do both these things was labor-intensive for IT, says Marr.

GRC tools often automate time-consuming manual processes, taking testing time from weeks to days, says Forrester's Othersen. Without such tools, a company might have to test manually for every regulation, which takes time, money and effort, especially if a company has thousands of servers or global IT operational processes.

Governance, risk management and compliance tools often automate time-consuming manual processes.

By implementing GRC Manager, Acxiom expects to shave two days off the process of creating its monthly and quarterly compliance reports. Acxiom also created a central repository for all its compliance data, which helps promote transparency and may cut costs. Marr says the tool allows IT to focus more closely on important business risk factors and how to better facilitate project management and workflow.

GRC tools also significantly streamline the compliance process because they eliminate redundancies, says Othersen. For example, a company might have Sarbanes-Oxley and Gramm-Leach-Bliley Act teams testing for access controls. GRC tools can identify whether teams are doing the same tests. "Some companies have 300 teams, so they could potentially be doing the same tests and getting the same results 300 different times," says Othersen.

An Emphasis on Process

Compliance is a major corporate objective at Purdue Pharma, a player in the highly regulated pharmaceutical arena. The $2.5 billion company, which operates only in the U.S., views it as both a business process and governance challenge. So Purdue Pharma VP and CIO Larry Pickett opted to use the company's suite of office applications (Microsoft Word, Excel and SharePoint) and its business processes to help manage the information to support regulatory requirements.

Pickett believes a company can effectively manage its own compliance needs with the proper executive commitment and structure in place. For that reason, he doesn't see the need for a GRC tool since compliance is embedded in the company's business processes.

The first step, he says, is identifying and prioritizing business risks facing the organization. For instance, a major risk, such as Information Systems Quality Assurance compliance, is assigned to appropriate business owners who then oversee their own specific solutions and reports in collaboration with IT. That data is collected into the Microsoft Office products; it is then shared and reviewed at various committee meetings held by the business owners.

"If there is a structure in place, it's pretty straightforward to see if you are compliant," Pickett says.

"I'm not saying that collecting and reporting data in a tool is useless, but I just don't see the need for it in terms of risk management," he adds. "The audit committees here aren't looking at a tool. They are looking at the risks, the challenges and what we are doing."

The main focus of your GRC regimen should be on identifying and managing the risks around one's business, not in implementing technology for the sake of technology, says Pickett.

Face it: The need for compliance isn't going away. And while the choice to purchase a tool to document and automate the process is yours, the choice to follow the regulations is not.

Contact Editorial Assistant Jarina D'Auria at *jdauria@cxo.com*. To comment on this article, go to *www.cio.com/article/470376*.

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Bad Times Call for Good Software

Why project and portfolio management matter in a recession

BY MERIDITH LEVINSON

PROJECT MANAGEMENT | IT departments are scrapping projects in response to tight budgets and the deteriorating economy. But this is no time to cut project or portfolio management.

"High project failure means you're wasting money, and there's even less tolerance for that in a down economy," says Margo Visitacion, a vice president with Forrester Research who covers project portfolio management and quality assurance.

Portfolio management can help you zero-in on the projects that are most worth the effort, while project management can help you execute those projects most efficiently, IT managers and project management experts say. (See "Make Every Dollar Count," Page 58.)

Make Informed Decisions

David Muntz, CIO of Baylor Health Care System, agrees that a downturn increases the need for project management software. "Good project management tools enhance the three Cs: communication, coordination and collaboration," he says. "With fewer people [on staff], you can't afford missteps."

Baylor Health Care's IT group uses Planview's project portfolio management software to prioritize projects, track their progress and manage demand for IT resources, Muntz says. Making informed decisions about which projects to work on is critical at a time when Baylor Health is being especially fiscally prudent, he says.

Muntz says that predicting costs accurately makes managing demand from the business easier. "If you didn't have any idea what it cost to do something, you'd do anything," he says.

For instance, Muntz says that at a previous employer IT was asked to move a printer from one side of a hallway to the other. IT used Planview to estimate that moving the printer, which cost about $400 when purchased, would cost $1,700 based on the labor and cost of adding circuitry. IT quickly determined that moving the printer wasn't worth it and could explain why to the business.

> "Good project management tools enhance the three Cs: communication, coordination and collaboration. With fewer people [on staff], you can't afford missteps." –David Muntz, CIO, Baylor Health Care System

Planview also highlights which projects should be sped up based on their business benefits. For example, Baylor Health Care decided that its electronic health-record system should remain a high priority during the downturn because of the efficiency improvements it will bring, Muntz says.

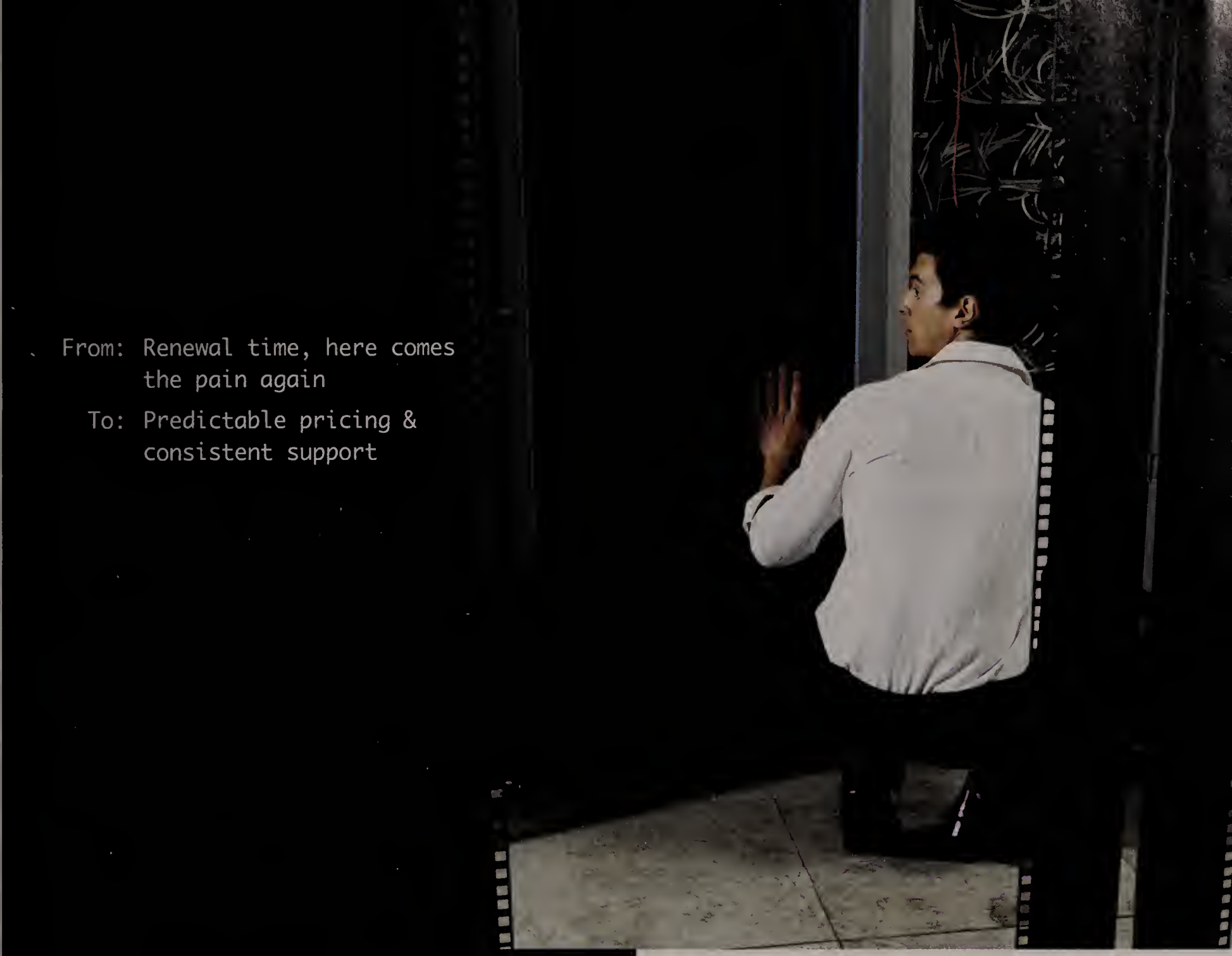
Pinpoint Critical Needs

At the Washington State Employees Credit Union, hosted project portfolio management software from AtTask helps determine which IT projects are critical to serving the banking needs of its roughly 150,000 members.

Keenan Wagner, a business systems analyst and project manager with the credit union, says the software provides a central location for information on all IT and facilities projects. It tracks the IT projects Wagner is working on, their progress, risks, cost and business benefits. Due to the visibility the software provides, a few IT initiatives were put on hold. When the credit union decided to create a money market product, Wagner used AtTask to see how it would impact other projects. The result: Another project set to go live was adjusted to make room for the money market initiative.

Baylor Health Care's Muntz emphasizes that software alone isn't enough. It must be used in concert with a sound governance process and tested project management methodologies. "It's the methodology you develop as a result of having a tool. You need good discipline to deliver what your customers need." CIO

Senior Editor Meridith Levinson can be reached at *mlevinson@cio.com*. To comment, go to *www.cio.com/article/461565*.



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ANDY BLUMENTHAL

Chief Interaction Officer

Interacting through social media is the latest craze. Consumer applications like Facebook, wikis and Twitter, along with collaboration software such as SharePoint—not to mention e-mail and instant messaging—are supposed to make us more productive. Yet we seem to be developing an aversion to personal interaction that threatens to make us less effective, not more so.

Deploy social networking and collaboration tools so that they complement, rather than replace, face-to-face contact

It's long been the case that people e-mail each other rather than get up and talk with their neighbors. People screen their calls and let them go to voice mail rather than talk to the person trying to reach them. We also avoid meetings. I know there are organizational dynamics that can make meetings awful, but it seems to me that we're using that as an excuse to avoid talking face to face. One senior manager told me that if a meeting is scheduled for more than an hour, he refuses to go.

There are good reasons for avoiding phone calls and meetings. Sometimes you don't want to be interrupted, and badly-run meetings are a waste of time. Social technology makes it easy for us to stay connected—and get work done—without personal contact. But we also need to bring people together to share information, strategize, brainstorm, network and build relationships. As CIOs who wish to marshal the benefits of social software, we must make sure we don't lose the benefits of personal, rather than virtual, interaction.

Different Ways We Socialize

If you look at different generations, you can see a difference in their attitudes toward social interaction. People my parents' age regularly socialize with their friends in person. Whenever I invite my parents to a quiet restaurant they complain because they want to go somewhere bustling with "atmosphere." My friends and I are more content to e-mail, IM, chat on the cell, network on LinkedIn and socialize occasionally as a complement to our electronic communication. Generation Y uses online social networks intensely, but also places heavy reliance on getting together with peers in person.

Personality plays a role too. Introverts are drained by social interaction and prefer to work in solitude, with short periods of contact as necessary. Extroverts get energized by their dealings with others—but even for them, technology may be replacing the up close and personal.

The CIO as Social Director

Given the diverse approaches that people have to interacting with others, how should a CIO manage the use of interactive technology? Clearly, social media and digital communications open up new possibilities for information sharing and innovation. They are great for collaborating in a geographically dispersed environment, providing feedback and sharing ideas generally. We should pursue them vigorously.

At the same time, we need to be mindful that we encourage appropriate levels of face-to-face interaction. In particular, being in the same room trumps long-distance communication when you want to give constructive criticism or need to work through challenging problems. Streaming bits and bytes will never replace looking someone in the eye, watching for informal cues and sharing real-life experiences.

The key is to ensure that we synthesize technology with opportunities for direct human interaction so that we enable a diverse set of capabilities. For example, you can webcast a meeting for 50,000 employees around the world and follow it with in-person, question-and-answer sessions in local offices. And you can capture the feedback from these local meetings to a centralized knowledge-base for follow-up action. This is the balance that is needed between virtual and real. CIO

Andy Blumenthal is CTO with the U.S. Bureau of Alcohol, Tobacco, Firearms and Explosives. The views expressed here are his own. To comment on this article, go to *www.cio.com/article/470375*.

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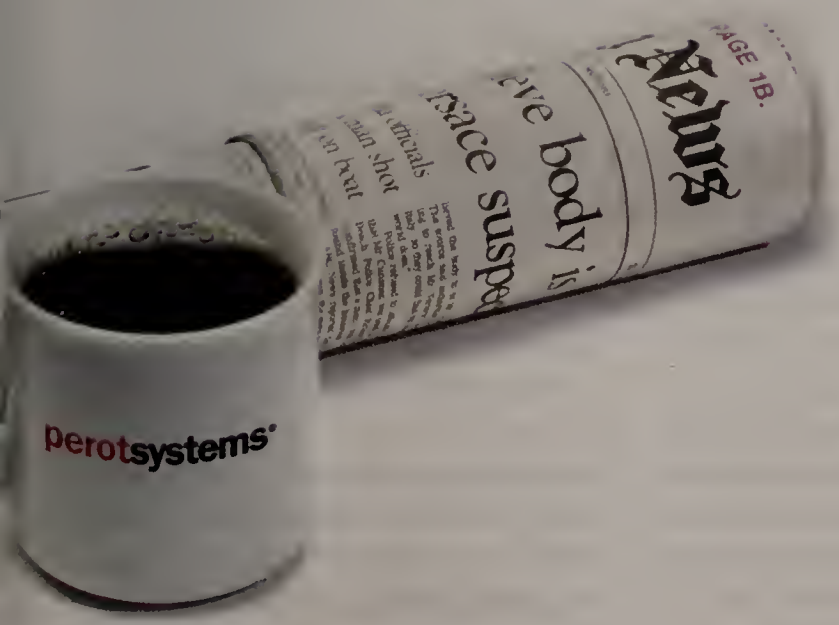

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EXECUTIVE VIEWPOINT

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Optimize Energy with Dynamic Power Capping

Measurement and Control are Keys to Saving Major Money in Data Centers

Mark Linesch
VICE PRESIDENT OF MARKETING, ESS INFRASTRUCTURE SOFTWARE, HP ENTERPRISE STORAGE AND SERVERS

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Energy management has become a high-priority issue for C-level executives in companies that own or maintain data centers. With supplies and prices subject to abrupt changes, businesses are turning to techniques that accurately measure and control energy expenditures as a hedge against the uncertainty of energy markets. CIO recently sat down with HP's Linesch to get his take on the most pressing energy issues, and HP's solutions to address those issues.

What challenges are your customers experiencing when it comes to managing power and cooling in their data centers?

As everyone knows, energy is a hot topic—not only for commercial businesses but also for consumers throughout the world. The costs associated with both energy consumption and securing energy capacity are important issues for customers as they build out next-generation data centers in support of new business initiatives. Power and energy challenges boil down to a couple of different issues. One is trying to measure "how much energy I'm utilizing within my data center." Many customers that we talk to don't have a good way of measuring server power usage, and typically rely on the "faceplate" value of the server or power calculators to estimate server power requirements. So the lack of accurate measurement techniques is clearly one of the big issues.

Another serious challenge is controlling energy consumption. Customers don't have the ability to limit server power usage, so they need to budget for worst-case scenarios. The result is inefficient use of power capacity, or "trapped capacity." We frequently run into situations in which the customer's server racks are only half full, yet they're being told by the facilities that there's not enough power and cooling available to add more servers. And adding new power and cooling capacity is very expensive, with a megawatt of redundant infrastructure for a Tier IV data center costing about $25 million. So customers everywhere are looking for ways to make more efficient use of existing energy capacity.

> "HP Thermal Logic can triple data center capacity and reduce energy consumption by up to 25 percent, or more than $330,000 in a 1-megawatt data center."

In what areas are HP's power-management products and services addressing key energy issues where other vendors fall short?

Being able to control the amount of energy consumption without putting electrical infrastructure at risk is critical. With HP BladeSystem, we can measure power consumption accuracy to within 3 percent. That's really important because it isn't an average, it isn't some sort of power calculator or some kind of theoretical estimate—it's based on actual workloads running on actual servers, and taking snapshots of specific power usage for a day, a week or a month. This increased accuracy, coupled with the ability to cap peak power usage, delivers the ability to budget for power needs more accurately and prevent a spike in power on any server from tripping a circuit or overwhelm-

Extend data center life with HP Thermal Logic

- Achieve accurate power measurement through Onboard Administrator or iLO Advanced.
- Capture historical trends and estimated savings with Insight Control Environment.
- Reclaim Data center capacity with Dynamic Power Capping.
- Forecast future power savings with Insight Dynamics VSE.

Source: Hewlett-Packard Co.

ing a cooling infrastructure. This means that customers are no longer forced to over-provision power and cooling capacity. Other vendors aren't able to do this.

How does HP Thermal Logic work, and what major business benefits are customers realizing?

The value proposition for Thermal Logic is based on three components. Number one, through our energy-efficient components and the work we do at the multi-rack level, we can reduce annual energy consumption by up to 25 percent, or more than $330,000 in a 1-megawatt data center. Number two; it is possible to reclaim trapped power and cooling capacity within the data center by changing power budgeting processes. Instead of estimating power consumption based on faceplate or power-calculator numbers, customers can accurately measure actual power usage and cap peak power loads on either an individual server or group of servers. We've found that customers can up to triple the power and cooling capacity in their existing data centers by turning trapped capacity into capacity used to run server workloads. The third aspect of Thermal Logic is the potential to extend the overall life of the data center by up to 50 percent by reclaiming unused power and cooling capacity. Another more subtle, but equally important, benefit is the ability to postpone costly data center construction and upgrade projects.

What is Dynamic Power Capping, and what are its benefits for HP ProLiant and BladeSystem users?

Dynamic Power Capping is HP-unique technology designed to enable customers to reclaim trapped power and cooling capacity within their data centers. If you've ever run too many appliances at once in your home, you know that it can trip the circuit breaker and shut off all the lights. In a data center, oversubscribing a circuit can have the same effect. Only in this case it's not your television that's turning off; it could be servers running mission-critical workloads. Because power-related outages are a big problem in data centers, facilities and IT teams make sure to budget for worst-case power consumption. But budgeting for the worst case can leave significant power capacity sitting idle in the data center. Dynamic Power Capping is the first solution in the market to cap peak-power consumption and protect electrical infrastructure from unexpected increases or spikes in power usage. With this protection in place, and more accurate power measurement, customers reclaim a significant portion of power and cooling overhead and use it to power server workloads. Competitive solutions cap average power consumption and can't protect circuits, so their ability to safely reclaim trapped power capacity is significantly handicapped.

> "Being able to control the amount of energy consumption without having any electrical problems is a very, very critical issue."

What questions about power management should CIOs ask their vendors before buying power-management products and services?

Well, number one, customers need to understand whether the solutions they are evaluating will protect electrical infrastructure. Is the solution hardware-based or software-based? Can it respond quickly enough to limit peak power usage? Next, they need to understand whether the solution can be configured to minimize or eliminate the performance impact of capping. There's no sense in implementing a power-capping solution that imposes a significant performance penalty. Does the power-management solution enable accurate power measurement over time, and enable power caps to be set at peak power consumption values? Finally, they should also look at competitive management solutions and compare carefully.

How can customers get Thermal Logic?

Thermal Logic is really easy for our customers to obtain. It starts with buying your favorite HP ProLiant server or BladeSystem enclosure. You may have to perform a BIOS or firmware upgrade, but there's no additional hardware cost involved. Second, you can either buy HP Insight Control Environment (ICE), the management software that allows you to set caps and to reclaim the trapped capacity we talked about, or upgrade your existing ICE licenses. Third, we have a complete portfolio of products, solutions and services to help customers better manage data center environments.

FOR MORE INFORMATION:

Download a copy of the **HP Dynamic Power Capping TCO** white paper at **www.hp.com/go/ReclaimCapacity.**

Further information can be found at **www.hp.com/go/DynamicPowerCapping.**

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DIGITAL REALTY TRUST

The Demanding State of the CIO

What to do now for your company and your own career

BY KIM S. NASH

CIOS WHO UNDERESTIMATE THE BEASTLY U.S. ECONOMY and overestimate their own prowess risk losing their jobs in the coming year. And the count may be surprisingly high. Senior technology executives feel quite confident in their abilities and reach, according to our eighth annual "State of the CIO" study. But they may not see the dangerous gap between how they and their bosses rate their work.

At first glance, the view from the CIO seat looks lovely. More of you report to the CEO and sit on executive man-

RUSS BOSTICK
CIO
Conseco

"We all wear many different hats, and that's what creates alignment."

Reader ROI

:: According to the data, things have neverlooked better for CIOs

:: Why the economy changes everything

:: Where the pitfalls lie

PHOTO BY STEPHEN HILL

agement committees this year, our study found. Tenure is up and so is pay. Nearly two-thirds of you also lead a non-IT function, such as operations or customer service (see charts, Page 49).

Technology, you report, is core to your company's products, to your distribution and sales models—heck, even to the very ways your company defines itself against competitors. And, you say, the IT group is pretty darn good. For example, 70 percent of the 506 CIOs polled said that IT is considered an integral business partner by the rest of the company.

You got it goin' on, right?

Maybe not. This year we compared your views with those of CEOs and other business executives surveyed by Forrester Research, which asked 600 big bosses to assess the performance of IT in key business areas. Brace yourselves.

While business leaders absolutely agree that tech is important to their company's products and competitive positioning, they also say IT isn't performing as well in these areas as CIOs think. For example, 46 percent of Forrester's business respondents rated IT "fair" or "poor" at improving the quality of products or processes.

Further, 64 percent of CIOs we surveyed said senior managers clearly communicate expectations for IT. Yet many of you report spending less time and having less of an impact on the number-one element keeping your company alive: customers. Asked which activities IT had the greatest impact on in the past year, only 15 percent of you chose managing customer relationships and 11 percent said acquiring and retaining customers. Those who expected to do great work in each of these areas next year: just 17 percent.

JESS REED
CIO
GEICO

If CIOs think understanding the customer is someone else's job, they will soon be out of a job.

Among CEOs, 53 percent said acquiring and retaining customers is a business driver important to IT decisions. Yet how well did IT support that endeavor in the past year? Forty-nine percent of the business execs judged IT's performance as "fair" or "poor." Another five percent said IT did not support acquiring or retaining customers at all. Ratings of IT's impact on managing customer relationships were just as bad.

At best, these disparities bounce IT out of alignment with business goals. But we aren't dealing with the best case. With each subprime bankruptcy, federal bailout and nosebleed drop in the Dow, the financial meltdown rewrites the CIO's agenda. The "global collapse" in real estate and financial markets, according to the nonprofit economic think tank American Enterprise Institute, has already extracted $25 trillion from the world economy, with half of that happening in the United States. When the carnage ends, maybe by late 2009, AEI estimates, losses will amount to $40 trillion. You don't fight this menace by waiting for a memo from the boss.

PHOTO BY CLAUDIO VAZQUEZ

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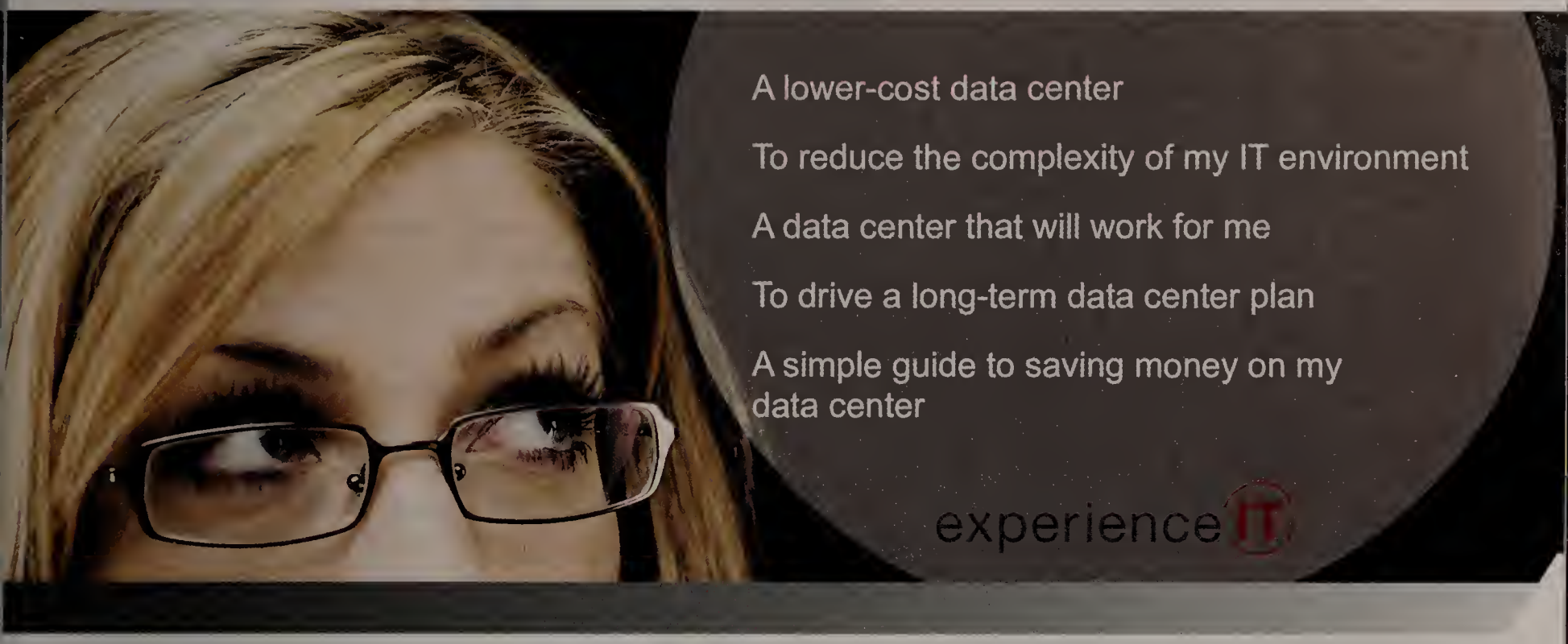

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CIOs need to stand up and employ skills beyond the basics to align with business and deliver payback.

To survive 2009, you will have to get real about what you do well (or not), starting with the mismatches we've identified in our survey. CIOs must be bold in hiring, reorganizing and rethinking IT because, already, disruption is everywhere. According to our recent research on CIOs and the economy, 40 percent of 243 IT leaders plan to cut their budgets from last year's level. Twenty-three percent of respondents have reduced staff in the last six months and another 11 percent plan to by April.

At real estate developer Lowe Enterprises, for example, CIO Rick Belmonte says he has cut 20 percent of his corporate IT staff, from 15 to 12. Another IT person in the field was laid off, bringing Lowe's total IT staff to about 65. The company also deferred most new development projects to 2010, Belmonte says. Before the federal government rescued insurer AIG from certain bankruptcy with an $85 billion bailout, Patrick Lanza, CIO of an AIG business unit, was working to integrate the separate general insurance IT systems of several lines of business. Now he's helping untangle those systems, he says, as AIG prepares to divest "toxic assets."

Conseco, another insurer, is better off financially than AIG, but still posted a loss of $180 million last year. CIO Russ Bostick gets calls from staffing firms about job candidates he won't hire. "We've been managing backfill requisitions very tightly," Bostick says. At 650 worldwide, IT headcount has drifted to a five-year low.

James Sutter, senior partner at The Peer Consulting Group and a former chief information technology executive at Xerox and Rockwell, points out just what it means that IT spending is one of the most visible corporate expenses, the benefits of which—even in good times—are difficult to chart: "The financial crisis," he says, "will wash out certain initiatives that really don't stand the needs test." (Indeed, 72 percent of IT leaders in our IT budget and staffing survey have already postponed [49 percent] or are planning to postpone [23 percent] discretionary projects.)

That, he says, also goes for CIOs. IT spending, which this year is an average five percent of revenue, according to our research, looks to many CFOs like a deep pool of money ready to be siphoned when financial statements need improving. But this is exactly what CIOs have to get ahead of. The risk, according to participants in a recent discussion at *CIO*'s The Year Ahead Summit, is that IT gets cut in the first wave, but if you cut too deeply—or in the wrong places—the company will be unable to respond to demand in the second wave. "In times of crisis, the business will try to create new products to get revenue," said June Drewry, former CIO of Chubb. These days, new business initiatives invariably involve IT in some way. In the wake of slashed IT budgets, growth-thirsty executives will find the well dry. In addition to stoking internal dissatisfaction with IT, that syndrome can further distress the business. That's no good for anybody. "That's the problem with centralized IT," said Drewry. "When budgets are tight, they're pointing the finger: 'It's you, not us.'"

Our data points to several ways you can move around this dilemma. Namely, by developing traits that mark a seasoned, change-making CIO: breadth of knowledge, the ability to sell a story and support it with data and the nerve to take charge. We aren't saying you'll be able to avoid cost cutting. Not this year. But if you take cues from CIOs who already practice these skills, you'll likely cut judiciously, and in a way that allows you to pour your energies into the one thing that will help your company grow out of this mess: customers. When the financial hell ends, maybe you will find that you yourself have withstood the needs test.

CIO-CEO Mismatches

OUR SURVEY illustrates several areas where, clearly, CIOs and CEOs work in lockstep. Bravo that three-quarters of both sets of executives polled see technology as essential to the company's sales and distribution model, for example. Sixty-five percent of CIOs believe technology is a competitive weapon, as do even more non-IT executives—72 percent.

Only 9% of CIOs say a **focus** on external customers is a **critical** leadership competency.

But the numbers also reveal disappointment in IT. For example, CIOs think they're better at addressing four key business drivers than do their non-IT executive colleagues. This includes using technology as a core part of products and as a competitive weapon (see charts, Page 49).

Such disconnects are "shocking," says Jess Reed, CIO at Geico. "If you truly have alignment, you're not going to have that surprise."

Fortunately, our data holds clues as to why this is happening and how to correct it. The upshot is that CIOs must sell the rest of the company on the value of the IT department and its work. "IT leaders struggle with marketing their value," says Ken Zivic, a consultant at the IT advisory firm Forsythe, because they imagine selling an unsavory practice. It doesn't have to be.

So what does it take to sell effectively? There are four essential traits.

Trait 1: Range of Knowledge

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stress tend to be multidisciplinary, says John Baldoni, a leadership coach and author of *Lead by Example: 50 Ways Great Leaders Inspire Results*. The same is true for CIOs in the current economic turmoil.

"You want your senior people to be deliberative, then decisive," Baldoni says, adding that it helps if they've led through a recession before, which probably means they're over 40.

Successful CIOs will be those who have rotated through other functions, run a line of business or in some other way learned a little something about life outside the data center. That would include CIOs who have climbed up through IT but, along the way, added an MBA or other advanced nontechnology degree to that experience. Supply chain, engineering, and operations are all good, says Rich Adduci, CIO at Boston Scientific.

"Know something about everything and relate it all back to IT," advises Adduci, who was an Accenture consultant before joining Boston Scientific in 2006. He has an MBA in finance and economics, and an undergraduate degree in manufacturing.

Companies recognize that well-rounded executives can be more effective than deep experts. Among "State of the CIO" respondents, 64 percent are responsible for a non-IT function in addition to their responsibility for IT. And this is not just a phenomenon of smaller companies. The ratio of CIOs wearing two hats has increased among the highest-paid CIOs in our annual compensation study, from 46 percent two years ago to 49 percent last year.

BARRY VANDEVIER
CIO
Sabre

CIOs would be wise to show some innovative chops at a time when new revenue-generating customers would be most welcome.

A breadth of knowledge simplifies communication, especially in those heavy strategy meetings where, these days, the pressure to cut, cut, cut spending can be enormous. Senior executives who can spend less time explaining basics and more time adding nuance to each other's points will make sounder choices, says Bostick, CIO of Conseco. "You can make faster decisions with such people."

When Conseco's executive vice president of operations was promoted to president of the company's core insurance group, Conseco divided that executive's duties between Bostick and the head of sales. Bostick recently hired a senior customer service executive who is also a lawyer. "We all wear many different hats, and that's what creates alignment."

Yet even if you lack direct experience outside IT, longevity at one company means you can take advantage of wide-reaching institutional knowledge. Be a student of the company you work for, advises Joseph Spagnoletti, SVP and CIO at Campbell Soup.

Spagnoletti, who has been at the company for almost 12 years, was promoted to CIO in August, replacing Doreen Wright, who retired. Now the CIO posi-

PHOTO BY REID HORN

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Web 2.0 Finds a Secure Role in the Enterprise

Consumer tools are changing the business landscape.

Whitney Tidmarsh
VICE PRESIDENT OF WORLDWIDE MARKETING,
EMC CONTENT MANAGEMENT AND ARCHIVING
Tidmarsh is responsible for building and shaping EMC's brands that drive market awareness and demand for its enterprise content management and archiving products.

In business, Web 2.0 is tainted with fear. But when Web 2.0 is done right, opportunity abounds, says Whitney Tidmarsh, vice president of Worldwide Marketing of the Content Management and Archiving Division at EMC. Read on for compelling insight into how enterprise content management (ECM) helps tame consumer tools for the workplace.

How is Web 2.0 changing business expectations?

A predominance of consumer tools is definitely changing the way business users expect to work with people and information, especially with the younger workforce—the digital natives—who have grown up online and thus interact very differently. What's more, there are technologies now that enable more of a push model, where users get what, *and only what* they want, when they want it.

Can you provide real-world examples?

Companies are now leveraging the great interaction metaphors of Web 2.0 consumer tools. At EMC for example, we've launched an online community to enable customers, partners and employees to collaborate, exchange ideas and share information. And Dell uses an area online, called IdeaStorm, to solicit customer ideas for new products.

How can Web 2.0-enabled tools be leveraged effectively in business?

Ultimately, you need to take the principles of Web 2.0 and bring them into tools that understand how to work in a business environment. Take, for example, reviewing marketing documents, which is done in a very Web 1.0-centric way today. You get the documents via email or hard-copy, mark them up and mail them back. But in a Web 2.0 sense, you have technology that understands who you are and then puts everything you need together in a context that makes sense—from a collaborative wiki delivery format that's easier to edit to dynamic links to content experts, competitive documents and even resources outside the company—so you can build the right message.

What are the risks to the business?

There is a fear of adopting Web 2.0, because of its principles of vast openness. Companies have to worry about things like security, risk management, audit trails, and safeguarding proprietary information. Those considerations fly in the face of classic social networking tools that aren't necessarily built for granular security and control. Instead, companies need tools that take advantage of the way people work—but within the context of a secure business.

What impact will this have on IT? Marketing?

For IT, the pressure is on. There's certainly a recognition of the opportunity to change the way users interact, but they're faced with balancing the empowerment of users with protecting business interests. For marketing, Web 2.0 offers new channels, different ways to meet new audiences. Marketers can build communities, hold virtual trade shows, and use Facebook, for example, as a distribution vehicle, giving marketing a bigger voice without the cost impact.

How important is the underpinning ECM infrastructure?

It's absolutely critical. Companies have a wealth of content that contains real business value, but without an ECM infrastructure, it's impossible to make sense of it. ECM is the engine for categorization, classification, security, deduping, and publishing. And, when you bring that together with version management and workflow, you've got a great mechanism for getting the right information to the right people in the right context. We've never had a more timely application for content management than with Web 2.0.

> "Companies have a wealth of content that contains real business value, but without an ECM infrastructure it's impossible to make sense of it."

FOR MORE INFORMATION: Check out the Webcast **"Why CIOs Should Embrace Web 2.0"** at **www.cio.com/webcasts/emc/web20**

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tion has expanded to include the Chief Process Officer role, leading business process optimization across the company, not just within IT. The technology group at Campbell has, over the years, built a reputation as leaders of change management, he says.

Now when a manufacturing plant, say, has a big question to answer or process to hone, officials call IT for a consultation, he says. "There's a dialogue where they will say, 'There's an outcome that we need. How do we get it?' Not, 'We need a new system. Please put it in.'" This improves the reputation of IT and, specifically, the CIO. It also gives IT inside knowledge of nontechnology priorities for the rest of the company.

Trait 2: Power of Persuasion

THINK ABOUT YOUR most influential colleagues. Not the ones with power inherent in their titles, but the peer influencers. They are powerful because of how they relay ideas. They tell stories that move you.

CIOs across the board must become better storytellers, says Sutter, of Peer Consulting Group. Too often, he says, IT is defined by how much money is in the budget. Don't get stuck there. Not during a recession.

Accept that IT is almost always considered a cost center, then move the conversation to what the company gets for that cost and, in turn, what it can offer customers, says Tim Young, vice president of IT at Bright Horizons, a childcare chain.

ROBERT FORT
CIO
Virgin Entertainment

Fort chats up customers when he drops in at Virgin Megastores to see how they're using the in-store kiosks and listening stations.

Young likes to tell a story about the role IT can play in winning new deals, in part because of the company's information security technology and processes. Bright Horizons was up against a rival for a deal with a large potential client. Young sent a member of his staff with the salesperson who was making the presentation to share the company's views on privacy and risk.

"We were the only ones with a security expert right there on the ground. It blew them away," he says.

Do security software, procedures and audits cost money? Of course. But not having those items, along with someone from IT to talk knowledgeably about them, would likely have cost Bright Horizons a client.

That's the kind of great story about IT that a CIO needs to tell when the finance chief asks smart questions about expenses, Sutter says. "Shift the discussion from figures on a page to real life."

No one advocates vapid spin. Rather, you collect facts and know your material well enough to fit the pieces together to show something new about your topic, whether it's your project, your staff or yourself.

Trait 3: Strength in Numbers

YOU MUST SUPPORT your command of words with an equally firm grasp of numbers. Like doctors tracking a patient's heart rate and white blood cell count, CIOs should know their own vital statistics. Items such as IT's current cost structure,

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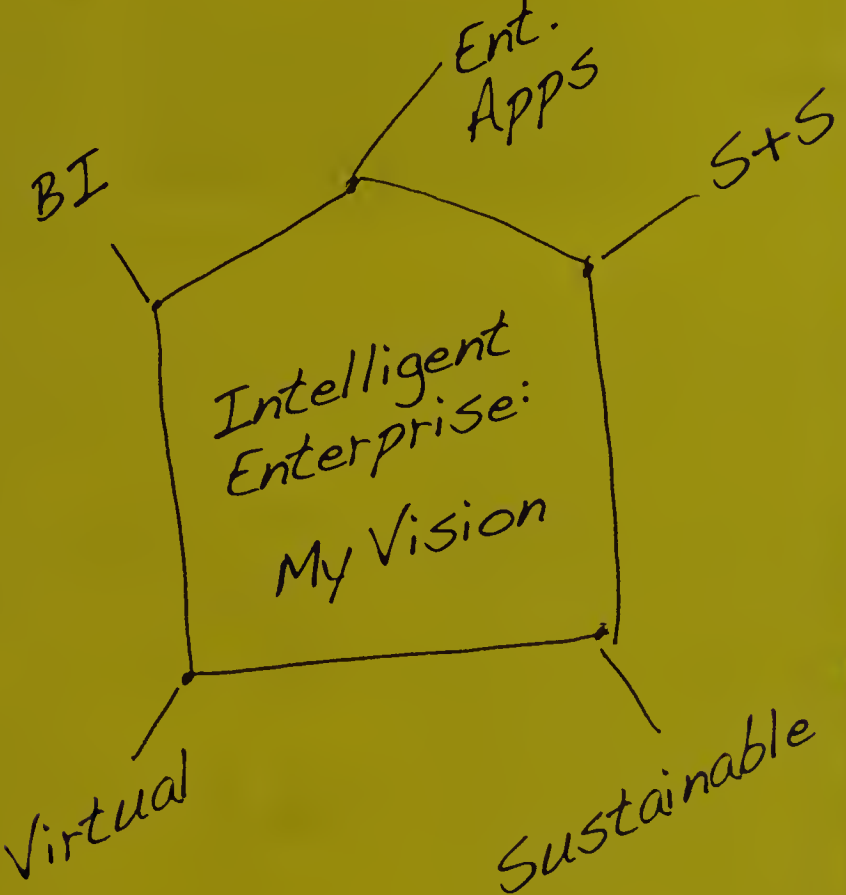

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Setting the Stage for the Intelligent Enterprise: Keys to Competitive Advantage

Times of economic uncertainty are also times of opportunity. Times to use technology to cut costs, streamline processes and lower the risk of new investments by providing decision makers with the critical business insights they need.

At Microsoft, we believe that intelligent enterprises—those that emphasize the efficient use of data and resources to promote enterprise agility, responsiveness, customer satisfaction and, ultimately, competitive advantage—will be in the best position to weather the current economic climate.

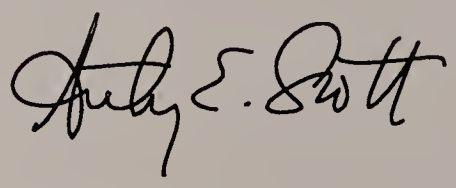
As CIO of Microsoft, looking three to five years into the future, I see three overarching priorities in our quest to augment our organizational IQ.

One is the continued simplification of our infrastructure and application portfolio. Simplification and consolidation onto a globally scalable platform will save Microsoft resources and make us much more agile. In our own space, we've gone from 8 percent to 25 percent in terms of virtualization in our data centers in just a year. Next year, we plan to achieve 50 percent virtualization.

The second priority is identifying and implementing a set of scalable enterprise applications that Microsoft will need not only to run our current business but also to support the businesses we want to engage in over the next two to five years. One thing is certain: Microsoft can't do everything by ourselves; third-party solutions and support from Microsoft partners will be among the keys to our success. To that end, we will steadfastly turn to our partners for collaboration opportunities so that our organization can become more agile, more responsive and more strategic.

Finally, the third priority: people. A difficult economic climate demands that everyone, from the data center to the C-suite, relentlessly add value to the business. Intelligent enterprises must provide workers with the tools for productivity, transparency, better decision making and better customer service—all ingredients for competitive advantage.

Now is the time to cement IT's value to the business by reaching across the organization and empowering people to take advantage of the business optimization that IT can offer. From virtualization to cloud computing to streamlined enterprise applications, innovation and attention to detail will pay dividends later, setting the stage for competitive advantage and success.



Tony Scott
CIO, Microsoft

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BI/Data Warehouse Solution Gives Lloyds TSB a Single Version of the Truth

The volumes of data multiplying inside Lloyds TSB presented a challenge to managing data and creating business intelligence solutions.

The U.K.-based global financial services company needed to ensure that its analyst community—the "bread and butter" of the organization—could access a single, consistent version of accurate, up-to-date data, according to Matt Sherriff, BI manager, Customer Value Management. Further, Lloyds TSB wanted a tool that integrated seamlessly with Microsoft® Excel®, which the analysts use for most of their work.

Lloyds selected Teradata's Enterprise Data Warehouse solution for the framework of its business intelligence architecture and data consolidation. By consolidating on one platform, Lloyds gains that single view of data across the organization. When executives refresh their dashboards of key performance metrics, the updates come directly from Teradata in real time. This not only prevents multiple copies of data but also reduces data latency. In addition, users can better share expertise rather than creating pockets of expertise regarding specific products.

"The key is to have a flexible, scalable model to drop in data as it becomes available," says Sherriff. "This gives us the architecture we need to support our growth."

Another benefit, Sherriff says, is the integration between the database provider and the tool provider—in this case, the partnership between Teradata and Microsoft. The connectivity between Teradata's Enterprise Data Warehouse and Microsoft's BI tools through SQL Server® Analysis Services has provided that flexible architecture that Lloyds needs as its company and data grow. In addition, users benefit by using Excel and PerformancePoint® to analyze and visualize data contained in the Teradata database via the familiar tools in Microsoft Office and the Web.

"Using Microsoft tools on top of Teradata has reduced the number of steps in our analysis from 17 to nine," Sherriff says. "This translates to lots of extra time that analysts can spend on more value-added activities."

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Notes to self:
Important to think about building a flexible model
Key points from Lloyds' BI success:
- Work toward a single version of the truth
- Create cross-functional team to own the solution
- Data and tool consolidation = maximum efficiency

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The accurate, timely delivery and receipt of business correspondence—especially billings and payments—are critical to enterprise operations. Being able to verify that the check really is in the mail, for example, can improve customer service and help predict operational cash flow.

The first step toward that verification is the USPS Intelligent Mail® barcode, which enables businesses to follow mail progress through to delivery. The second step is to integrate this standard into your enterprise. This is where the Pitney Bowes MAIL360 solution comes in.

Based on Microsoft's .NET platform and using Windows Server® and SQL Server®, MAIL360 tracks each mail piece and confirms updated address information from USPS or a third-party provider, automatically correlating it with a company's customer data.

Having access to address changes before mail is sent has huge implications for mass marketing and billing: There are 50 million U.S. changes of address per year, 1.6 billion returns to sender, and 6 billion pieces of mail discarded by USPS as undeliverable as addressed.

"The real payback from the Intelligent Mail® solution is tracking for each mail piece and then integrating that data with the enterprise's business processes, making the barcode an integral part of marketing, sales operations, fraud prevention and quality management," says John Hanton, director of product management, for Pitney Bowes Group 1 Software.

Knowing when and from where a payment was mailed helps companies better manage cash flow, save processing costs and improve customer service. For example, if an insurance company cancels a homeowner's policy because a payment doesn't arrive on time, then receives the payment two days later, it must reinstate the policy, which can cost up to $250 in paperwork processing. With MAIL360, when a remittance check enters the mail stream, the barcode gets recorded and transmitted to the billing system, "so the insurer knows it's in the mail, and if it arrives two days late, it's no big deal," says Hanton, adding that in the case of a large insurance company, this solution has saved $10,000 per day in cancellation and reconnection costs.

Being able to predict when a check will arrive gives companies a powerful cash-flow management tool. A large mortgage company recently reported that it had loans of more than $400 billion. "Imagine the value to this company of knowing three to five days in advance when nearly $2 billion in checks is going to arrive," Hanton says.

Pitney Bowes
GROUP 1 SOFTWARE

Notes to self:
Takeaways from conference:
• Mail tracking offers solid ROI, happier customers
• Intelligent Mail® barcode—talk to Legal about PB solution's ease of compliance!
• Win–win for customers and employees

Pitney Bowes and its Group 1 Software division are leading providers of mail-stream technology solutions to manage the flow of information, mail, documents and packages.

For sales info, call 800-327-8627 or visit www.g1.com

OPEN TEXT
The Content Experts™

Brewery Taps E-mail Archiving Solution for Better Search, Server Performance

Although its history dates to the early 1800s, a European brewery realized that everything evolves—including technology. Recently, it looked for a new solution to handle an explosion of e-mail.

With e-mail use growing 30 to 50 percent a year, the family-owned company turned to Open Text for an e-mail management system that would help manage employee inboxes. It decided to implement Open Text's LiveLink ECM—Email Archiving for Microsoft® Exchange and LiveLink ECM–File System Archiving.

The critical factors for the brewery were enterprise search functionality, automated and interactive archiving, and improved storage. Previously, employees were limited to searching the body of e-mails, not attachments, and had to search different e-mail systems and shared folders, browsing and opening individual items to find the data they needed. With more and more e-mail passing through the system, server performance was tested as well.

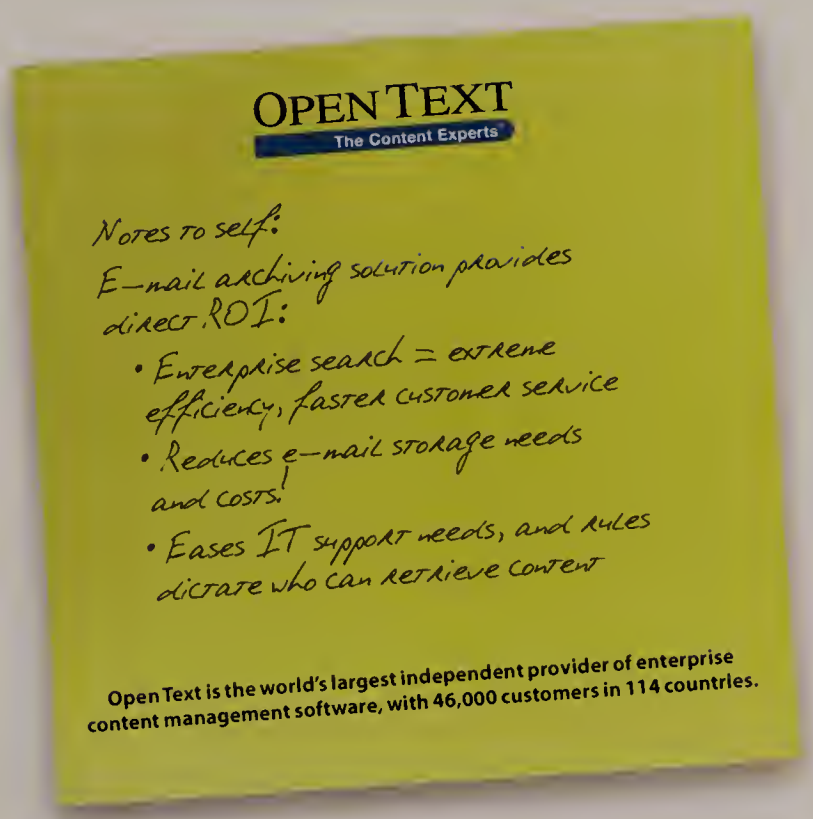
The Open Text solution enables the brewery's 1,500 employees to search across the enterprise library, including archived mail from the Exchange database and shared folders. Today, searching contract correspondence with its thousands of restaurant and bar partners brings up e-mails as well as contracts originally stored in a shared folder.

The Open Text solution also offers an alternative to PST files, which are a typical solution to the challenge of overflowing inboxes but can become unstable as they grow. LiveLink ECM captures the contents of PST files into the archive to reduce internal support costs.

"We understand the value of making enterprise information accessible across the corporate value chain," says the brewery's CIO. "Employees really see the benefits in full-text search across repositories and get a complete hit list within seconds. This makes their work much more effective and productive."

Through rule-based archiving, the e-mail management system offloads e-mail content and attachments from Microsoft Exchange servers to cost-effective storage media, resulting in a two-fold win: optimal e-mail server performance at a reduced cost. By deploying Open Text's LiveLink ECM solution, the company is not only reducing its backup and recovery costs by 85 percent, but it is also shrinking the storage required in the Exchange database by 30 percent.

Check out www.opentext.com for more product and service information



ADVERTISING SUPPLEMENT

OPEN TEXT
The Content Experts™

Productivity Booster Enables Housing Agency to Boost Loan Quality by 300%

For more than 30 years, the Colorado Housing Finance Authority (CHFA), a Denver-based state agency, has been assisting low-income families and small businesses in obtaining the loans they need to buy property.

To help the agency fulfill its mission without losing its financial equilibrium, the agency implemented Stars, a business process management (BPM) solution that CHFA created, which combines Open Text Process Center, Microsoft ProClarity® and SQL Server® 2005. "Stars, and the Open Text and Microsoft technologies behind it, has been instrumental in our achieving a 30 percent increase in productivity" for loan evaluators, says Karen Harkin, CHFA's director of Home Finance.

As an automated solution, Open Text Process Center significantly streamlines the loan review and evaluation process that used to be "manual and time-consuming," according to Kelly Becker, a technology program partner at CHFA.

By incorporating business rules, best practices and metrics for optimizing efficiency into the system, CHFA improved its loan quality by a whopping 300 percent. This is measured according to the total number of problem loans that lenders have to reject or repurchase, explains Matt Adney, vice president of product management at Open Text.

Armed with an expanded set of loan review criteria, as well as access to more than 40 customized reports, CHFA analysts can identify and often address potential problems early on, so loans are more likely to be approved by lenders.

With Stars' business intelligence capabilities, "we have more insight into the quality of our loans, and that means we can make better-quality loans," says Harkin.

Lenders can also book loans, check loan status and look up borrower information on CHFA's Web site, Homeconnection.com. This not only improves relations between CHFA and the banks and loan companies it works with, but it also frees up much of the time staff previously spent answering lenders' queries.

Open Text and Microsoft tools enabled CHFA to slash application development time by close to 70 percent, empowering the agency to respond faster to changing market conditions, Adney says.

NOTE to our readers: Shortly before going to press, Open Text purchased Captaris, the company originally profiled on this page. The products and solutions offered by Captaris will continue to be offered by Open Text. For more information, please visit www.opentext.com.

OPEN TEXT
The Content Experts

Notes to self:
Interesting case study on successful workflow solution implementation:
- Streamlined and automated business processes, cutting down on manual, time-consuming processes
- Customized reports
- Slashed application development time by close to 70%

Open Text, an enterprise software company and leader in enterprise content management, helps organizations manage and gain the true value of their business content.

3i Infotech®
Innovation • Insight • Integrity

Hub & Spoke Architecture Solidifies Customer Connections for First Express

Remittance service providers must be as close to their customers as possible, and we're not talking figuratively. Having a lockbox or payment collection site right down the block instead of in the next state cuts mail delivery time and speeds up the amount of time before a business can get its funds by at least a day.

That's why First Express Remittance Processing Inc., First Tennessee Bank National Association's subsidiary, adopted an architecture solution called Hub & Spoke™ from J&B Software, a subsidiary of 3i Infotech, a global IT solution provider. The spokes of the architecture, in the bank's case, are the payment collection centers, which funnel remittance and payment data into the hub locations for mission-critical processing and information storage.

First Express is using the Hub & Spoke architecture in combination with J&B's Transaction Management System, a workflow-based solution that captures, digitizes and archives the information contained in checks, stubs and other paper remittance material. It then tracks and manages remittance processing from initial image capture through crediting the appropriate client.

"A Web-based interface lets customers look up payment records and other documents instead of waiting for images to be faxed or sent via snail mail," says Gary Hubert, vice president of operations, First Express. "The software uses Microsoft® SQL Server® to store data in a flexible, open environment. Using SQL programming tools, First Express programmers sort data and generate customized reports to customer specifications, such as 'only payments over $1,000.' In the old days, we had to scroll through copies of the checks to find those that met the customer's criteria."

By centralizing payment processing and related functions at several interconnected hubs, First Express has significantly reduced infrastructure costs at the remote sites, or spokes. Servers are centralized, and sites are equipped with only the necessary scanners and workstations.

"This has enabled the company to set up new sites close to key customers quickly and inexpensively," says Hubert. "That gives us a major competitive edge." For example, First Express recently set up a spoke in Nashville, Tenn., partly in response to a large customer's RFP, which ultimately meant that it "won that company's business," he says.

Hubert adds that the Hub & Spoke solution allows First Express to be physically close to its customers and adapt quickly to their needs.

3i Infotech® Innovation • Insight • Integrity J&B SOFTWARE

Notes to self:

Transaction processing solution offers serious business benefits:

- Competitive advantage
- Personal customer service increased with impressive results
- Workflow solution saved company significant time with its Web-based interface

Web Address: www.JBSoftware.com

3i Infotech is a global IT solution provider with revenues of approximately $500 million. J&B Software, its subsidiary, is a leading provider of payment and remittance processing software in North America.

For more info, call
3i Infotech:
732-225-4242
J&B Software:
215-641-1500

Broadridge™

BPM Solution Helps Global Investment Bank Improve Productivity, Slash Costs

Trade breaks are the bane of a brokerage firm's existence. When the price that the buyer and seller have agreed on doesn't match the amount recorded by the broker, it's up to the broker to fix the problem—fast. Failure to do so can mean a hefty loss in customer good will—and maybe in cold hard cash, too, because if the market price jumps before the sale is reconciled and rerecorded, the broker has to make up the difference.

Breaks are typically the result of miscommunication or incorrect data entry, and they tend to proliferate when trading gets heavy. Historically, during periods of market volatility, the volume of breaks would threaten to overwhelm the broker-dealer staff, who must sort through lengthy reports and conduct time-consuming research to determine which breaks require immediate action and which could safely be put aside until later. "As a result, brokerage firms often had to either pay their employees overtime or hire temporary help to ensure that breaks were addressed in a timely fashion," explains Mark Schlesinger, chief information officer for Broadridge Financial Solutions.

All that changed for a large global investment bank in December 2004, when one of its subsidiaries implemented an exception-management application. The day the system went live, 400 trade breaks that might have taken days to research and resolve were identified and resolved within minutes.

That platform is called Ascendis™, a business process management solution developed by Broadridge. Built on Microsoft® SQL Server® 2005 and Microsoft BizTalk® Server 2006, Ascendis uses business rules to automatically resolve and assign trade breaks. For the remaining open items, the flexible interface allows users to immediately identify high-priority breaks and take action—dramatically improving operational efficiency and enhancing enterprise-wide controls that mitigate risk.

Since implementing Ascendis, the investment bank has been able to reduce the number of trade breaks that need additional attention by more than 90 percent. That has helped it gain efficiencies in other areas as well. "Ascendis has enabled our client to increase trade volume by as much as 62 percent without increasing staff or paying overtime. Additionally, our client has reduced exception write-off costs by 90 percent, representing a savings of more than $200,000 per year," Schlesinger reports.

Broadridge™

With more than 40 years of experience, Broadridge is a leading provider of technology-based outsourcing solutions to the financial services industry, offering the most comprehensive range of fully integrated solutions to meet the operational needs of banks and broker-dealers worldwide.

Broadridge offers solutions to support the entire investment life cycle, including solutions for investor communications, global securities processing, and securities clearing and operations outsourcing.

For more information, call 888-237-1900 or visit www.broadridge.com.

Broadridge processes an average of 2 million trades per day!

EPICOR®

ERP Solution Provides Local Visibility Into Energizer's Global Markets

Energizer's enterprise resource planning strategy resembles its own advertising slogan: It "keeps going and going and going…"

Because it sells products in more than 160 countries, Energizer needed a solution to address the unique needs of each market. The company embarked on a long-term ERP strategy that incorporated an enterprise business software solution from Epicor as a key element of its remediation program.

Localization of data, in a consistent and accurate manner, is critical for Energizer, which must quickly conform to a variety of tax rules, business customs and statutory requirements across global markets. "We wanted a product that already allowed for the majority of these local practices," says Energizer CIO Randy Benz. Epicor "was a huge hit with us."

Because Epicor is built on the Microsoft® platform, it provides consistency of information across operations at regional and global levels, and enables Energizer business executives to more easily make fact-based decisions—a key part of its efforts to be an intelligent enterprise. Benz notes that some companies make the mistake of implementing a global system from the center out, when it should start from the bottom up to achieve consistency in individual markets.

"Epicor gives us a vehicle to consistently classify information in markets that aren't otherwise working together, such as in Asia, where a lot of markets are islands and tend to be autonomous," Benz says. "It gives us a platform to do that while still meeting local needs, and allows us to roll that up."

Users access ERP data from within Microsoft Outlook®, Word, Excel® and SharePoint® portal applications. This allows them to update ERP information without leaving the familiar Microsoft environment. Epicor Portal data views are published as Web parts, which can be integrated into Microsoft SharePoint portal pages, and which enables enterprise-wide collaboration, enhanced business decision making and a rich end-user experience.

Energizer is especially pleased that the costs of deploying Epicor were one-third to one-half that of a typical "big iron" ERP system. Benz says that, over time, the core capabilities of Epicor have grown right along with Energizer's needs. That's because the Epicor solution follows the tradition of Microsoft technology and provides flexibility, scalability, ease of use and solid ROI.

Follow up with Epicor:
Info@epicor.com or
800-999-6995

EPICOR®

Notes to self:
Important to think about bottom-up ERP rollout, to achieve consistency
Key points from Energizer's ERP success:
- Built-in localization = great fit for global markets
- Deployment cost one-third to one-half of Tier 1 solution
- Plays nicely with Microsoft SharePoint

Epicor is a global provider of enterprise software and solutions to more than 20,000 customers in countries around the world.

SIEMENS

BSH Gets Creative and Reduces Costs with PLM Solution Rollout

The global consumer products giant Bosch und Siemens Hausergäte (BSH) is well known for its high-quality household appliances. With hundreds of products in various stages of design and manufacture, BSH needed a heavy-duty product lifecycle management (PLM) solution to ensure employee collaboration is smooth, consistent and accurate.

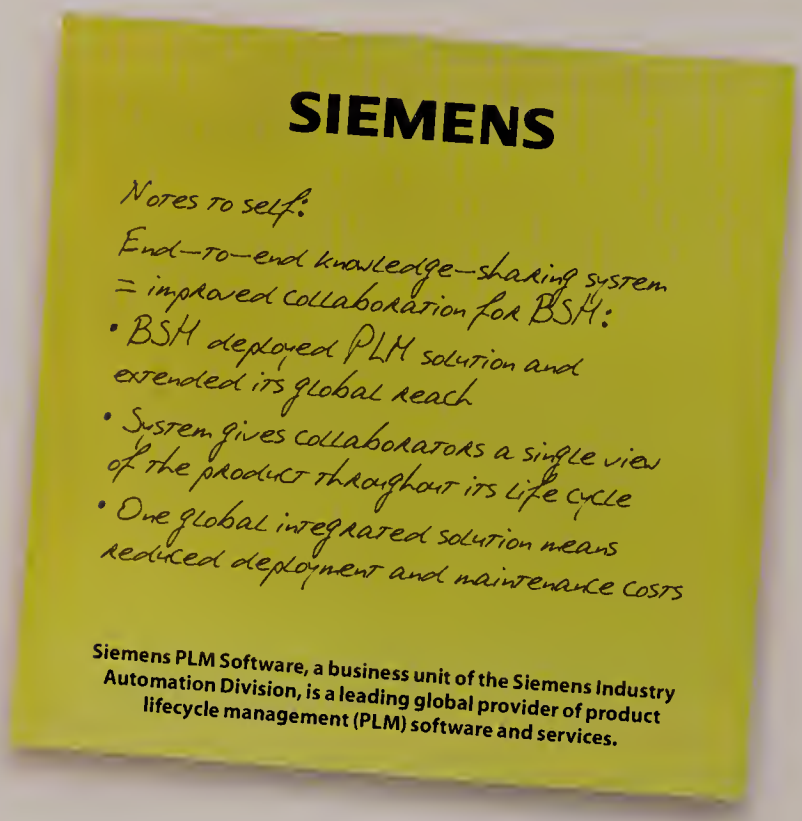
BSH chose to standardize using Siemens PLM Software—specifically, Teamcenter, NX and Tecnomatix—to deliver a managed development environment for global digital product development. Having an end-to-end PLM solution allows BSH to connect everyone in the company and give them a holistic view of what's happening with their products.

For example, experts in Spain, China and Latin America jointly develop the fundamental technological concepts for new equipment, and then use those concepts as the basis for products customized for local markets.

Using Teamcenter in product design collaboration, BSH has been able to create 2.5 million 3-D models and subassemblies, more than 50 percent of which are distributed globally among its 4,700 users.

In addition to the collaborative nature of Teamcenter, BSH was impressed by its ability to integrate with the Microsoft® family of products—specifically Microsoft Office Communicator, Windows®, SQL Server®, Office and SharePoint®. Users' familiarity with these applications made adoption seamless, and ensured consistency and a parallel effort in the product life cycle. Because Teamcenter enables BSH to configure the system instead of customizing applications, the company realized up to a 35 percent reduction in PLM implementation costs. BSH has also been able to reduce training costs because Teamcenter's user interface is built on Windows, allowing the company to bring new personnel up to speed quickly in high-growth regions including Asia and North America.

"Teamcenter gave BSH a comprehensive, end-to-end PLM solution," says Andy Kennington, EMEA director of marketing, Digital Lifecycle Management, at Siemens PLM Software.



Follow up with Siemens at: 972-987-3000, or www.siemens.com/plm

OSIsoft.

Real-time Performance Infrastructure Ensures Customer Satisfaction

Imagine you're responsible for a process line at a major refinery or chemical plant. Now consider the consequences if the corrosion prevention chemicals you're adding to the process aren't working.

That's why Nalco Co., which produces specialty chemicals and services for water and industrial process treatment, chose to implement a real-time performance management infrastructure to profile chemical performance.

"In the chemical process business, it's very important to document the performance of the chemicals that are used by our customers," says John Schlitt, Nalco's marketing manager for automation.

To capture this critical product data, Nalco turned to OSIsoft's PI infrastructure. Built on Microsoft® Windows Server® 2008 and integrated with SQL Server® 2008, the PI System™ leverages Microsoft Office SharePoint® Server 2007, Excel Services and Microsoft Excel® 2007 so that users can more easily collaborate, analyze and monitor performance data and solve complex chemical process problems.

One of the key differentiators for Nalco is that the PI infrastructure is scalable, highly available and reliable because it's built completely on the Microsoft platform. It also complements Microsoft's Software-plus-Services (S+S) strategy and its Azure™ Services platform. OSIsoft's managed PI S+S approach has enabled Nalco to centralize and structure "data collection for our customers, so that local collection points may push data to a central location," Schlitt says.

OSIsoft's PI System automates the data collection and archiving process, freeing Nalco staff from manual administrative tasks and allowing them to focus instead on customer solutions and satisfaction. For example, if a processing interruption occurs, the PI System's real-time data capture enables engineers to quickly analyze the information and collaborate in realtime to find the root cause. But perhaps most critical, Nalco can substantiate the effectiveness of its chemicals quickly and put actionable results directly into customers' hands. "This solution allows us to offer our customers high-quality performance data, and allows them and our service engineers to optimize treatment programs for maximum cost/performance and sustainability credits, as well as benchmark their operations," says Steve Taylor, president of Nalco's Energy Services Division.

S+S is value now, straight out of the box

OSIsoft.

Notes to self:

- Real-time solution, mixes on-prem + hosted delivery of software and services
- Benefits: dynamic visibility, reliable, scalable, available & secure!
- Offers better use of resources – integrates with BI and Office Business Applications
- Check out examples and case studies at www.osisoft.com

OSIsoft delivers the PI System™, the industry standard in enterprise data infrastructure. The PI System enables business in real-time for more than 14,000 process manufacturing installations around the globe.

Sustainable Computing

Asset Management Solution Drives Reduction in Energy Consumption

The printing and paper industry is making strides toward becoming more eco-friendly, thanks in large part to sustainable computing technologies.

Take Mohawk Fine Papers, for example. The New York-based company is the largest premium paper manufacturer in North America, an EPA Green Power Partner and an advocate for recycled papers. But Mohawk wanted to step up its sustainability efforts, and turned to its production floor to do so.

To gain control of its machinery and equipment—which can consume significant power resources—Mohawk implemented the Infor™ Enterprise Asset Management solution. Infor EAM leverages the interoperability of Microsoft® SQL Server®, Excel® and SharePoint®, making it easy for workers to use, from the executive level to the factory floor. Plus, it's Web-based, making deployment and adoption nearly seamless.

With Infor EAM, Mohawk can quickly collect and distribute manufacturing asset information such as maintenance schedules, machine usage and equipment life-cycle data. That translates into better decision making.

"Integration with familiar Microsoft tools takes the application's complexity out of the equation," says Paul Stamas, Mohawk's vice president of IT. "We can take information right down to the desktop, empowering users to access and act on that information.

"I think the most important thing we'll gain is visibility into the entire life cycle of our equipment," Stamas adds. "With Infor EAM, executives will have visibility into which equipment is consuming the most energy at any particular time," enabling them to quickly make changes that will impact the company's bottom line.

Indeed, Stamas reports that the Infor EAM solution has helped his company reduce overall energy consumption by nearly 10 percent—saving more than $100,000 annually in energy costs. It's also having a long-term, sustainable impact on the environment—using equipment more efficiently has resulted in a significant reduction in carbon dioxide emissions.

On the back of those successes, Mohawk has applied Infor EAM to other assets, and has had similar wins in terms of consolidating spare parts and managing its storeroom inventory. "We expect to use it to manage other assets, such as handheld electronic devices and equipment within the IT organization," Stamas says, adding that EAM helped streamline procurement efforts, reducing the total transaction costs within purchasing operations.

INFOR™

Notes to self:

- Case study: asset tracking pays dividends (www.infor.com/content/casestudies/mohawk.pdf – share with staff)
- User-friendly solution = excellent results
- Control assets > Reduce energy costs > Big $ savings (Mohawk saved $100,000!)
- Follow up with Infor: 800-260-2640

Infor acquires and develops functionally rich software and then makes it better through continuous innovation, faster implementation options, global enablement and flexible buying options.

Visit www.infor.com/goinggreen for more info

AVAYA

Equipping Home Workers with Sustainable Technology Brings Cost Savings

In the current economic climate, companies of all sizes are looking for sustainable ways to save money while increasing productivity for their business and for their employees. Enabling individuals to work from home achieves both goals by reducing energy consumption and costs and by offering greater employee flexibility, which in turn stimulates production.

But before a company can go down that road, it needs the right communications software so that workers can efficiently connect with customers and collaborate with colleagues.

Mindwave Research is a Texas-based research, analysis and strategic planning firm. Its home-based workers needed a comprehensive solution with excellent audio quality to communicate with respondents in carrying out their market research. That's why Mindwave chose Avaya IP Office, a highly modular IP telephony system that integrates with Microsoft® Office Communicator.

The integrated IP Office and Microsoft Office Communicator solution enables users to dial contacts with a simple mouse click, and launch or answer phone calls from their desktop using the full-featured and reliable Avaya communications platform.

Avaya's technology allowed Mindwave's teams to better communicate and increase productivity. What's more, employees reported higher job satisfaction as a result. The implementation enabled the company to scale back its office space and cut its real estate costs by 89 percent, while simultaneously reducing commuting costs for its workers.

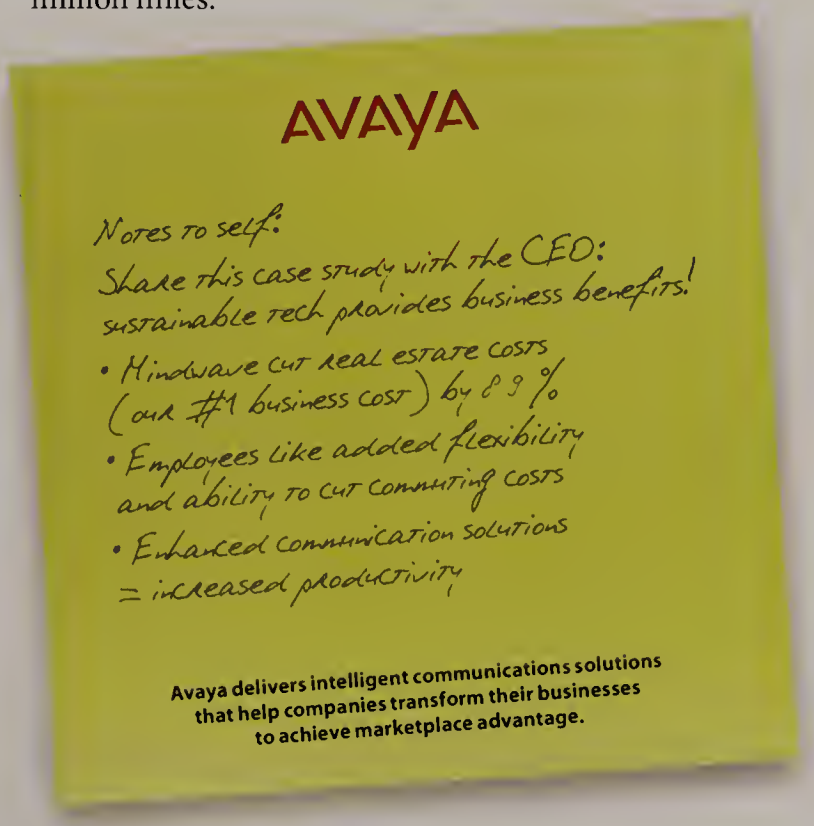
Jason Snook, IT director for Mindwave, says a key requirement was providing employees with the right high-quality equipment and technology to do their jobs.

"People should have the same handsets at home as in the office, and they should be able to work interchangeably at home or in the office simply by logging into a workstation," Snook says.

Whether it's a small business or a large enterprise like Avaya, the value of teleworking is clear. Avaya has adopted the work-at-home technology it implements for its customers. "Our unified communication solutions have had a very favorable impact on our costs as well as the environment," says CIO Lorie Buckingham.

Globally, Avaya has more than 2,200 full-time teleworkers, and 75 percent of employees work at home at least part of the week. Avaya estimates this practice has reduced the company's carbon emissions by more than 8,000 tons annually, and has cut annual employee travel by more than 15 million miles.

www.avaya.com



TIDAL®
SOFTWARE

Tidal's Data Center with Hyper-V Solution Brings Wave of Cost Savings, ROI

Nowadays, CIOs face a perfect storm when it comes to data center management. Business-critical applications keep proliferating, while the underlying systems and services they depend on grow increasingly diverse.

"Distributed computing technologies like virtualization and SOA have dramatically increased the complexity of data center infrastructures," says Thomas Hooker, vice president of marketing at Tidal Software. "Even before the financial crisis hit, CIOs were being asked to do more with less."

Tidal's product suite helps IT leaders meet this challenge. Built on Microsoft® platforms including SQL Server® and .NET, the data center management solution set brings together real-time performance management and automated, scripted execution of applications and processes across systems ranging from mainframes to virtualized servers, including Windows Server® 2008 Hyper-V™ technology. Being able to automate in real time with Hyper-V makes it even easier to realize the cost savings virtualization offers.

Tidal's product suite addresses three core aspects of data center operations:

Performance Automation: Tidal® Horizon™ monitors and analyzes performance and availability for business-critical applications like SAP, drilling down to the component level to determine the source of bottlenecks and other problems. Customers have reported that Horizon reduces mean time to resolution of problems and failures by up to 90 percent.

IT Process Automation: Tidal Intelligent Automation™ provides an integrated platform for defining, documenting, automating and managing IT processes to provide services; like server provisioning more consistently and efficiently.

Workload Automation: Tidal Enterprise Scheduler automates and monitors business processes that require interaction among multiple server platforms. Automated alerts go out when a task fails to execute.

Tidal's product suite has enabled customers to cut costs while boosting the quality and efficiency of IT processes. The paybacks have been huge: One major office supply chain expects to realize a 45 percent ROI from replacing 12 legacy applications with Tidal Enterprise Scheduler. The company reports saving $300,000 in labor costs through enhanced automation and centralization. Over a three-year period, it expects to save $2 million in hardware and software costs, and $1 million through more efficient management and control of job processes.

TIDAL®
SOFTWARE

Notes to self:
Tidal's data center products offer major benefits:
- Reduce mean time to problem resolution by up to 90%
- Save labor costs through automation
- Reduce hardware/ software expenses

Get more info at www.tidalsoftware.com.

Tidal Software is a leading provider of application automation and performance management solutions for IT operations.

call 877-558-4325 for more info

Hyper-V and Recovery Management Poise Investment Firm for Virtualization Success

With more than $26 billion in assets under management, Munder Capital Management cannot risk losing data in a disaster.

To help protect its assets while reducing IT costs, Munder decided to add server virtualization using Microsoft® Windows Server® 2008 Hyper-V™ to its IT infrastructure. What makes the solution noteworthy, however, is the integration of Hyper-V with Munder's backup and disaster recovery solution, CA ARCserve® Backup.

"One of the big plusses for us in using our existing CA ARCserve Backup solution is that it enables us to achieve our disaster recovery objectives through interoperability with Hyper-V virtualization," says Ed Eades, senior systems integrator for Munder. He cites several direct business benefits for Munder as well: cost reductions in servers and licenses, power and IT resources; consolidation and reduction of storage; increased data recovery speed; and a simplified implementation.

By having CA ARCserve Backup handle the migration from the physical server environment to a virtualized environment, Munder can duplicate its IT-related work over and over again by using their existing infrastructure. The ease of use and the integration with Hyper-V enabled them to integrate both products effectively, increasing IT productivity and speeding time to value. From a green perspective, Eades believes it makes sense to shift to a virtualized environment for disaster recovery. "Moving to a virtualized environment enables us to significantly reduce our hardware costs as well as operating costs like electricity, floor space, support and maintenance," he says.

Out-of-the-box interoperability enabled Munder to quickly incorporate Hyper-V technology, and its existing disaster recovery solution helped speed the deployment. CA ARCserve Backup allows Munder to protect its applications and data running on Hyper-V from application-level, client-level and host-level scenarios.

Now, Munder is taking virtualization a step further by transitioning to a virtual workplace. Its goal is to move some of the company's IT resources, including desktop applications, to a single controlled data center environment provisioned under a central management point.

Laptop users can now access their virtual desktops and applications through Microsoft's Remote Desktop Protocol, from any place, at any time. Munder has all of the benefits of a high-end centralized server and storage solution with enterprise-class security and data protection. Together, CA and Microsoft are working to ensure that Munder's virtual workplace is fully operational, easily managed and well protected.

Check out
www.ca.com/recovery

Munder case study proves ease of interoperability between existing backup and virtualized environment:

- Builds on existing Microsoft® infrastructure and CA Recovery Management solution
- Provides framework for virtual workplace
- Offers efficient disaster recovery with enhanced security

CA, one of the world's largest information technology management software companies, unifies and simplifies the management of enterprise-wide IT.

Innovating to Improve the Planet

At Microsoft, we believe in the potential of software and technology to help people and businesses around the world foster environmental sustainability. Discover how Microsoft and its partners use innovative technologies and responsible business practices to address environmental challenges worldwide.

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CIO 100

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including fixed and variable expenses, and the consumption factors that affect costs show how IT is performing. CIOs should know their own current and past performance metrics, as well as projections for the next three years, says Albert Eng, a former IT executive and senior advisor at Cerberus, the private equity firm that bought Chrysler in 2007. These figures are especially handy should your company become an acquisition target as the economy forces acquisitions and divestitures, Eng says. Having a good assessment of your team, understanding the capacity of your systems, maintaining forensic analysis of past projects and being able to present all of that in a compelling way to an acquirer amounts to "the best chance of survival for the acquired CIO," he says.

TIM YOUNG
Vice President of IT
Bright Horizons

"It comes down to leadership and aggressive passion. If you don't have those, the world around you is going to define who you are."

Even on a daily basis with no M&A scenario at hand, Barry Vandevier, CIO at Sabre, knows how compelling numbers can be. The $3 billion travel marketing and distribution company has been "on a mission," he says, to tamp IT costs for several years, having been dealing with the pressures on the air travel industry for that long.

Labor has been one area of steely focus. Sabre studied the economics of staffing in the U.S. and other countries and concluded that domestic work is more expensive. But Sabre didn't outsource on a mass scale. Instead, the company started hiring in different geographies, such as Poland, South America and India. Decisions about where to staff were tied to the company's focus on broadening its customer base and the possible advantage of having technology and its delivery teams close to their customers. In 2003, 85 percent of Sabre's technology workforce was in the U.S. By 2006, it was 45 percent, about where it stands today, Vandevier says. In part, that's because of a European acquisition, he says. "But also, we had a big move in workforce, pushing for more efficiency. This is nothing new with us."

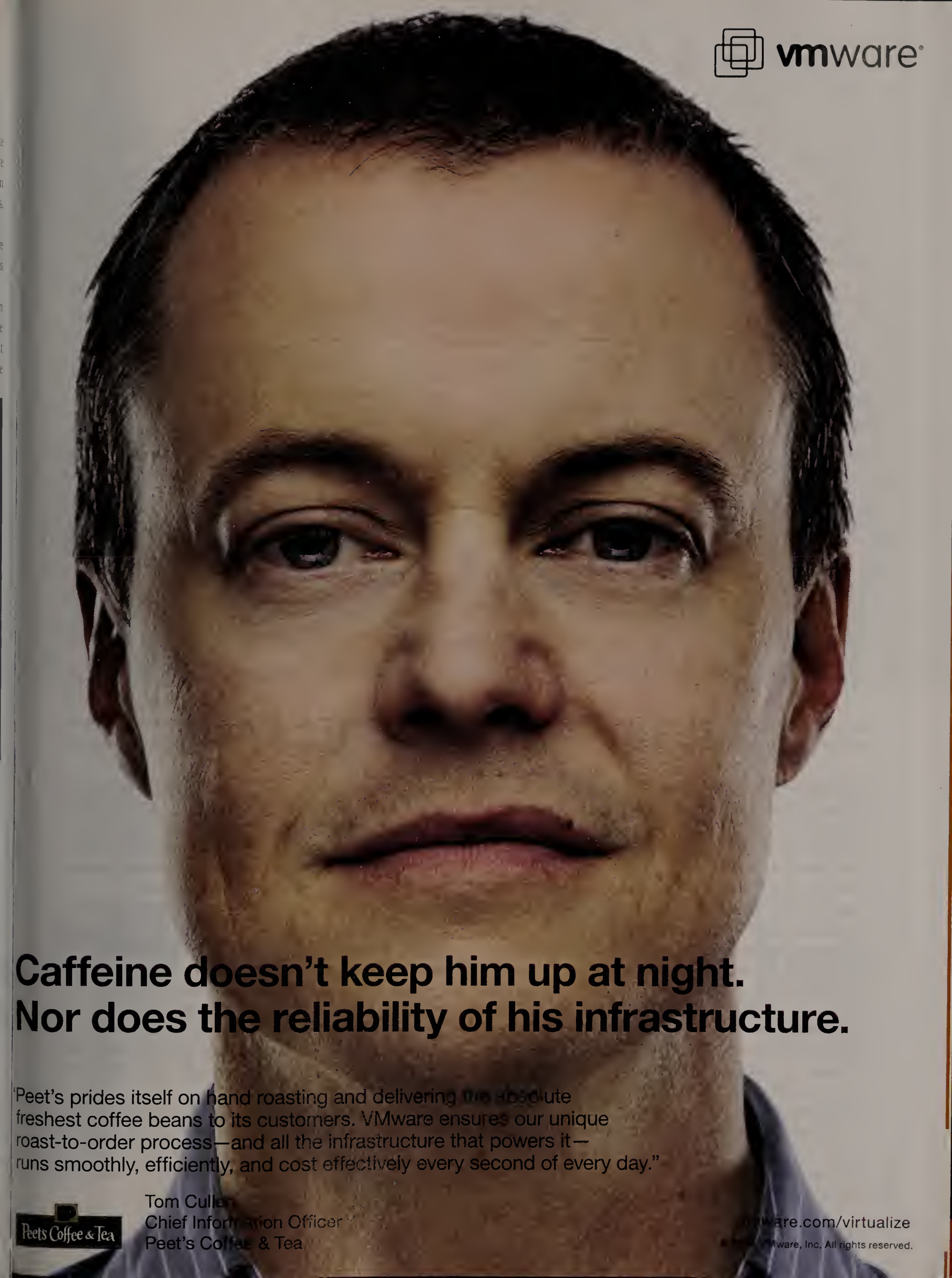
Trait 4: Nerve

YOU KNOW THAT leadership table everyone talks about? Create your own. Several CIOs we talked with about the survey note that they have designated their own IT steering committees in order to match business goals to actual technology projects. They then invited the CEO to join.

It's empowering, says Ian Patterson, CIO at online brokerage Scottrade. "I sit at [founder, president and CEO] Rodger Riney's table, but Rodger sits at my table, too."

That touch-point recently helped streamline application development work, Patterson says. At a meeting in October, he and Riney, along with various IT managers, were talking about the process of incorporating customer wishes into Scottrade

PHOTO BY KATHLEEN DOOHER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products or services. Traditionally, a product development group outside IT meets with customers and filters requests to IT. "There's a lot of back and forth, like a game of telephone," Patterson says.

Riney there and then suggested sending some of his key architects to attend customer conferences, to see and hear the wish lists firsthand.

A CIO and CEO on each other's strategy committees means "it's not just me listening and Roger telling. It's not just one-way," Patterson says.

At Bright Horizons, Young created an information risk committee that he cochaired with a senior attorney in the company, and he asked the chief financial officer, CEO and other senior executives to join. He did it partly to show IT's ability to innovate in the areas of privacy and information risk.

"When are IT leaders going to stand up and define frameworks on their own rather than rely on 'the business' to do it for them?" he asks, emphasizing that "the business" and IT are really one and the same.

By the way, it must be noted that cultivating nerve would also allow CIOs to seek out assignments needed to become multidisciplinary and tell their IT success stories.

65% of CIOs believe IT should **envision** business possibilities and **initiate** with IT.

Endgame: Customers

THE BEST CIOs tend to two goals: making employees, also known as internal customers, more efficient. And directly helping bring in more paying customers for the company's products or services.

But right now, most CIOs are doing only one of these tasks well, and they and their bosses know it. Asked in our "State of the CIO" survey to rank a list of 10 areas where IT had the greatest impact in the past year, CIOs put improving workforce productivity as number one. Managing customer relationships and acquiring and retaining customers took the two bottom spots out of 10. CEOs and business executives in Forrester's poll agreed that IT is far better at improving workforce productivity than getting and keeping money-paying customers. Yet acquiring and retaining customers will be the most important factor driving IT decisions this year, the CEO group says.

For some companies, such as Fandango, the online movie ticket seller, and Sabre, the airline reservation system, IT *is* the business. Elsewhere, some old-line companies have remade themselves around technology. Geico, for example, has seen its business soar online in the past three years as it built a new Web infrastructure.

If CIOs think understanding the customer is someone else's job, they will soon be out of a job, says Geico's Reed. In addition to internal IT, Reed also oversees the company's online division, which is key to the company's future. Most of Geico's insurance quotes are produced online, as is most of the company's new business.

"I can't get away from growing the business and retaining customers," he says. "I live it every day. It is part of my accountability."

He's not kidding. Reed urges even casual business contacts (such as a reporter interviewing him for an article) to visit Geico.com for a free insurance quote, supplying a special code to type in for data mining purposes.

But in nearly all industries, technology will touch nearly every customer, says Shane O'Neill, chief technology officer at Fandango. "Even if it's company-to-company self-service on the Web, with people just looking for information about you, that's a customer transaction that IT touches directly."

A traditional focus on serving internal users holds some CIOs back from interacting with customers or even researching information about customer trends, says Michael Rapken, CIO of YRC Worldwide, a $9.6 billion transportation company. "As much as we all want to do that, most CIOs are going to think about supporting sales and marketing, not thinking about how can I go generate revenue."

It's not clear from our survey whether CEOs have given a clear customer mandate to CIOs. But it is clear that CEOs think technology is key to acquiring and keeping customers. That's an opportunity CIOs would be wise to grab, to show some innovative chops at a time when new revenue-generating customers would be most welcome, says Sabre's Vandevier.

But don't wait to be invited (read: told). Use your nerve. It'll impress the CEO, Sutter says. Let the CFO stay inside, working his spreadsheets, while you venture to branches, facilities, retail stores, wherever customers gather. "Get out there. The news will get back sooner or later. It wouldn't hurt if you took some risks."

Robert Fort, CIO at Virgin Entertainment Group, chats up customers when he drops in at Virgin Megastores, to see how they're using the in-store kiosks and listening stations. Vandevier goes on Sabre sales calls.

Tap your most promising staff to come along. This adds more and varied perspective to the knowledge you're gathering. Plus, a special assignment like this also injects some zing into your staff's work lives, especially effective as training and travel budgets disappear.

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May 3 – 5
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Location to be confirmed

Visit www.cio.com/executive-programs or call 800-366-0246 for complete event details

Indeed, the time will come this year to shrink expenses, if it hasn't already. When it does, cut, yes. Defer, yes. But don't go into a holding pattern, Rapken says. Enrich existing applications to, you guessed it, please the customer.

Rapken still sends managers from the IT department to visit other departments to listen to their ideas for new features for YRC's new online customer billing system. "You have to be creative and innovative, even if the overall goal is to hunker down and cut costs," he says.

Don't Repeat History

LOOK AT WHAT happened the last time the economy tanked. After the dotcom bust in 2001, the view of IT, and CIOs by extension, wasn't exactly favorable. The genesis of that bust was largely IT overspending and overpromising, and the rest of the world over-believing.

The better part of a decade later, CIOs are wiser about defining new frameworks for generating revenue. That is, for collecting, parsing and interpreting the terabytes of data customers create and then giving salespeople the tools they want on virtually any computing device. But CIOs today must know more about translating business goals into IT projects, measuring the results and translating them back into a business success story.

Research Report

Access the full **RESEARCH RESULTS** at **www.cio.com/documents/pdfs/2009_state_of_the_cio_highlights.pdf.**

CIO.com

What happens to CIOs on the other side of this economic bust will be different from 2001 only if you assert yourself, don't wait for an invitation, certainly don't wait to be told, says Young of Bright Horizons. "When we don't rise up and deal with adversity, we will have to adopt someone else's perspective," he says. "It comes down to leadership and aggressive passion. If you don't have those, the world around you is going to define who you are."

Who you are, or should be, is a partner to the CEO in maneuvering the company through these tough times. If some CIOs misunderstand the goals of their CEOs or the nuances of company operations, they can cut the wrong expenses and sack the wrong people, says Patterson, Scottrade's CIO.

Know your business and assert and explain how IT makes a difference. Be an equal.

"You're going to see CIOs who are just spending time down in the guts and looking at cost cutting and not working with their CEOs to talk about value," Patterson says. "They're not going to be long-term in their roles." In other words, don't let yourself fail the needs test. CIO

Senior Editor Kim S. Nash can be reached at *knash@cio.com*. To comment on this article, go to *www.cio.com/article/470337*.

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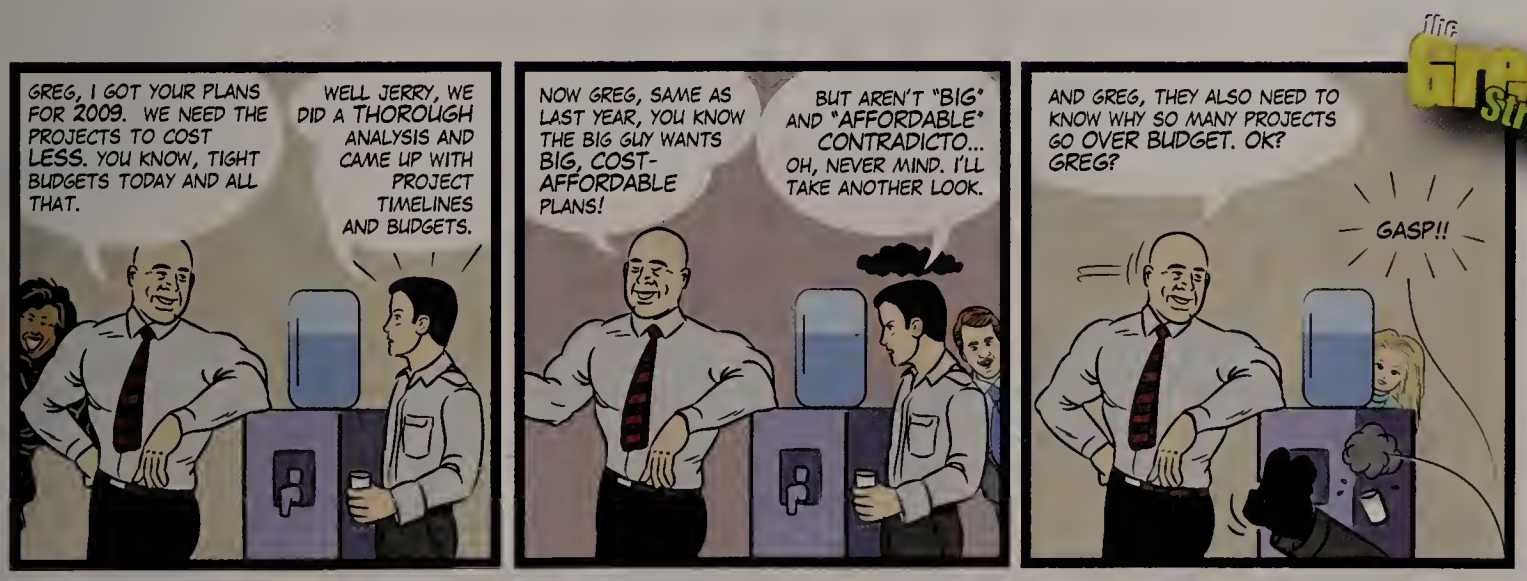

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It has been a year since we last spoke as part of CIO Magazine's survey of IT leaders. I'm sure you'd agree that our world looks startlingly different than just a few months ago. Macro-economic conditions have ushered in unprecedented change, new risks and unanswered questions. While there is no "quick fix" in this environment, one thing remains clear - adversity for the many will create opportunity for the few. The path won't be easy or obvious, but the CIOs who create incremental efficiency to self-fund innovation, at a time when others simply retrench, can position their organizations for differentiated success.

The billion dollar question is how? Let's hold that thought and recap some highlights from this year's "State of the CIO" survey. The results show that the transformation of the CIO role is ongoing, in some areas quite dramatically, with an increasing number of leaders both reporting to the CEO and actively participating in executive management committees. In fact, the percentage of CIOs with a seat on the executive committee in very large companies jumped from 60 percent to 80 percent last year – a decisive shift. Given this elevated role, it should come as no surprise that more CIOs are spending their time maximizing the alignment of IT initiatives with business priorities. To further the point, nearly 75 percent of surveyed CIOs cited strategic planning as their most critical leadership competency. Perhaps not coincidentally, three-quarters of these CIOs also believe IT is viewed as integral to the business by their respective organizations, and 38 percent indicate that IT will drive important innovation. Regardless the vector, all data seems to suggest the CIO has truly arrived as a partner and peer to the business.

As we look to the immediate future, there no doubt will be increased focus on efficiencies, productivity and initiatives that produce short-term payback. We share that view with one subtle twist. We think the leaders of tomorrow will leverage technology and change to go beyond new mandates for efficiency. They will in essence over-achieve on efficiency as a means to self-fund innovation and new services that would otherwise be resource-constrained. In turn, this will be key to building competitive advantage. And these leaders will do this at a time when many competitors turn their full and nearly exclusive attention to cost reductions.

CIO leadership was made difficult in days past, but this role is clearly experiencing organizational ascension. CIOs now have the opportunity and latitude to use their general management capabilities and collaborative partnership with the business to manage risk, invest strategically and transform organizations. That's easier said than done, but we expect this focus will likely be the hallmark of tomorrow's winners.

I wish all of us well as we approach the uncertainties of 2009. To connect with me or my executive team, please visit: www.hp.com/go/hpsoftwarecio.

Warm regards,

Thomas E. Hogan
Senior Vice President
HP Software & Solutions
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The Survey

OPEN THE GATEFOLD FOR OUR 2009 SURVEY RESULTS

This year's "State of the CIO" survey reveals that now is no time to get comfortable. Despite differences across industries and among different types of CIOs, the CIO role is more important than ever. But with acceptance (finally) at the executive table come new, business-focused responsibilities and shifting expectations. See how you—and the CIO role—are evolving...

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—Sheila Bridge, Senior Director, IT Global Compliance and Controls, Kellogg Company

Kellogg's automated lifecycle solution for managing change worldwide was the key to moving an entire data center, with zero service interruption.

Outcomes: Produced data for Sarbanes-Oxley audits in just one half day—an improvement of 85%, increased the number of changes processed by 40% and reduced the monthly emergency change rate by 50%

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156% ROI

from a new customer-centric organization that delivers efficiency and better service levels

"Better service to the customer is the reason we did this—transforming a culture from systems to customer services orientation."

— Kelvin McGrath, General Manager, Boral Shared Business Services

To meet a key corporate goal of sustainable performance and growth, Boral had to transform the way its help desk resolved incidents reported by business customers.

Outcomes: Boral shifted the focus from transactions to customer experiences, broke even within 27 months, and saved 5 times the initial cost over 10 years.

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All About You

Tenure Rises

The CIO's **average tenure** is 11 months longer than it was last year, and three months longer than in 2007. Small-company CIOs stay in their jobs the longest: six years, one month.

YOUR AVERAGE TENURE IN YOUR CURRENT POST

5 yrs., **4** mos.

Your Boss

More IT heads are reporting to the CEO now than any time in the past five years.

Note: The remaining 21% of CIOs report to a corporate CIO and to other functional and operational leaders.

Time and Money

You can't trade a higher salary for job security these days. On average, lower-paid government CIOs stay on the job only three months longer than their highly compensated financial services peers.

Industry	Average Salary	Average Tenure
Finance/banking/insurance	$335,700	5 yrs., 8 mos.
Manufacturing (noncomputer)	$273,800	6 yrs., 3 mos.
Wholesale/retail	$252,300	4 yrs., 3 mos.
Health care	$243,100	4 yrs., 10 mos.
Education	$162,300	5 yrs., 2 mos.
Government	$157,400	5 yrs., 11 mos.

CIO++

Nearly two-thirds of all CIOs have leadership responsibility for a non-IT area of the business. Business Strategists are more likely than other types of CIOs to have additional roles.

Area of Responsibility	All CIOs	Business Strategists
Security	32%	33%
Strategy	25%	38%
Administration/operations	20%	31%
Risk management	14%	13%
Customer service	14%	23%
Procurement	9%	12%

Note: Respondents could chose more than one answer.

More Clout

The percentage of midsize-company CIOs reporting to CEOs jumped to **47%** from **38%** in 2008. At large firms, **44%** of CIOs report to the top boss, up from **35%** last year.

What You Do

1. Aligning IT and business goals

2. Cultivating the IT/business partnership

3. Improving IT operations/systems performance

4. Leading change efforts

5. Implementing new systems and architecture

6. Driving business innovation

7. Redesigning business processes

8. Controlling IT costs

9. Developing business strategy

10. Looking for competitive differentiation

11. Managing IT crises

12. Managing security

13. Negotiating with vendors

14. Developing go-to-market strategies and technologies

15. Studying market trends and customer needs

Respondents were asked to select five activities that best characterize their focus and how they spend their time.

The Real Key to Success

70% of you say long-term strategic thinking and planning is the leadership competency most critical to your role, up from **56%** last year.

Who Gets Your Time

Based on our survey respondents' choices of which activities capture their time and energy, we classified them according to the three types of CIOs in the CIO Executive Council's "Future State CIO" model: Function Heads (30%), Transformational Leaders (52%) and Business Strategists (18%). Business Strategists spend the least time with their IT staff.

	Function Head	Transformational Leader	Business Strategist
Your company's executives	19%	22%	26%
IT staff or team	42%	39%	32%
Non-IT employees	21%	19%	19%
IT vendors/service providers	11%	10%	9%
External partners/customers	8%	11%	14%

Note: Respondents were asked to estimate the amount of time spent with each group.

Who You Are

More heads of IT claim the **CIO title** than ever before.

	2004	2008	2009
CIO	**49%**	**60%**	**66%**
CTO	3%	4%	4%
VP/IT	13%	11%	8%
Director	29%	18%	11%
Other	6%	6%	10%

Slightly less than half of CIOs

(46%)

say that IT is still considered a cost center.

The New Alignment *Challenge*

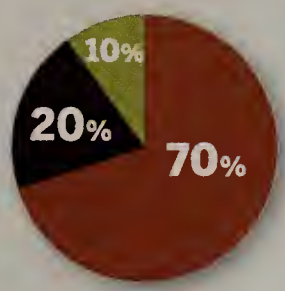
CIOs and business leaders finally agree: IT plays a critical role in a company's success. But that doesn't mean you and your colleagues always see eye to eye. We found disconnects when we compared the answers of CIOs at large companies with those of business leaders surveyed by Forrester Research.

64%

of CIOs say senior management has clearly communicated what it wants from IT.

Full Business Partners?

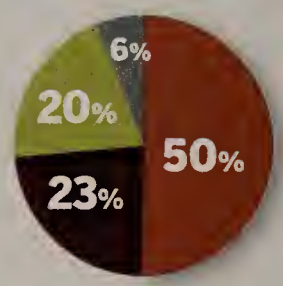
CIOs say IT is a key player...



The IT organization is considered an integral business partner by the rest of the business.

...but not when it comes to every decision.

IT leadership is involved appropriately early on in mergers and acquisitions.



Agree Neutral Disagree Don't Know

Technology Is Critical, but IT Performance Lags Expectations

Of course you think IT is important. Business execs believe it even more.

Technology is...	CIOs	Business Executives
A core component of company products and services	77%	81%
Central to how you differentiate from competitors	65%	72%
Primarily used to reduce business costs	46%	66%
Essential for your distribution and sales model	75%	77%
IT is effective at...		
Delivering core components of products and services	85%	70%
Differentiating from competitors	69%	61%
Reducing business costs	75%	64%
Meeting distribution and sales expectations	72%	67%

Note: Results reflect companies with more than $1 billion in revenue. Business executives were surveyed separately by Forrester Research.

Struggle for Control

CIOs say the IT organization is responsible for major technology decisions. Business leaders think otherwise.

The IT organization is responsible for...	CIOs	Business Execs
Negotiating with and managing vendors	89%	44%
Configuring systems	87%	60%
Managing systems in production	88%	55%
Managing IT projects	76%	51%
Deciding on acceptable security/privacy risks	75%	50%
Selecting vendor-offered solutions	61%	41%
Setting technology investment priorities	54%	30%

Note: Results reflect companies with more than $1 billion in revenue. Business executives were surveyed separately by Forrester Research.

Innovation from technology is a C-level and board-of-directors priority at 58% of companies—but significantly less so at firms with Function Head CIOs.

Conflicting Agendas

CIOs say that IT will have the most impact next year on workforce productivity. But when it comes to making new investments, business leaders are focused on acquiring and retaining customers.

CIOs (Ranked IT's impact)	Objective	Business Execs (Ranked drivers for IT decisions)
1	**Improve end-user workforce productivity**	4
2	Drive innovative new-market offering or business practices	3-tie
3	Reengineer core business processes	6
4	Lower company operating costs	2-tie
5	Improve quality of products and services	3-tie
6	Support globalization	5
7	Improve security/risk management	*
8-tie	Manage customer relationships	2-tie
8-tie	**Acquire and retain customers**	**1**
9	Enable regulatory compliance	*

*Not asked. Note: Results reflect companies with more than $1 billion in revenue. Business executives were surveyed separately by Forrester Research.

MORE RESULTS ON PAGE 56

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230% ROI

while gaining secure, reliable, rapid access to patient information

"By moving entirely to a digital imaging environment, we needed a solution that would grow, but would not impose increased administration requirements on our IT staff."

— Michael York, Senior Systems Engineer

Asante Health System's physical system for handling patient films had become a barrier to efficient patient care. Asante chose the HP Medical Archive Solution to create its cost-effective, highly available, Picture Archiving and Communication System.

Outcomes: Up to 900% faster retrieval times of critical patient information, with $1.8 million net savings and 230% ROI over five years

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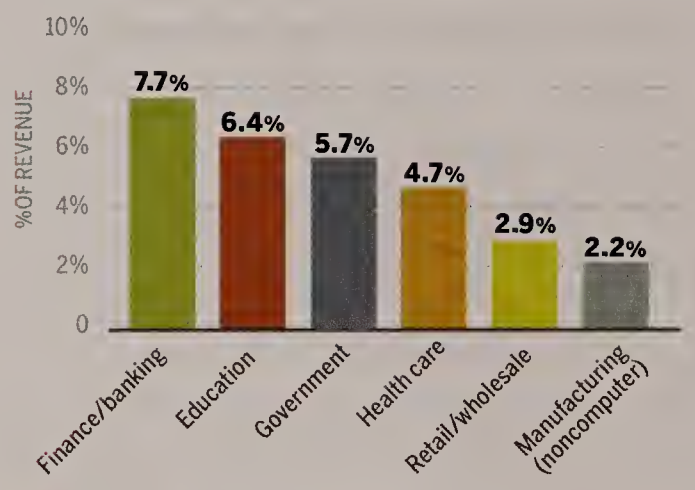
Your IT Spending

I.T. SPENDING BY INDUSTRY

Manufacturing companies spend relatively less on IT than other industries. Also, manufacturing CIOs are less likely to report that their IT organizations are considered integral business partners.



CIO RESEARCH

SURVEY METHODOLOGY

CIO's eighth-annual "State of the CIO" survey was administered online from Sept. 2 through Sept. 17, 2008. Senior-level IT executives were selected from the CIO audience database and invited to take the survey. Findings are based on responses of 506 heads of IT. Twenty-two percent of respondents were from companies with annual revenues of less than $100 million, 36% had revenues between $101 million and $999 million, 37% had revenues of $1 billion or more (5% declined to answer). The margin of error is +/- 4.4%. Percentages may not add to 100 due to rounding.

The "Tech Priorities" survey was conducted online from Nov. 19 through Nov. 28, 2008. Results are based on 438 respondents, 34 percent of whom are heads of IT. Data from Forrester Research is based on a July 2008 survey of 600 North American business executives at companies with $1 billion or more in revenue. *–Carolyn Johnson, Research Manager*

Research Report

Access the full **RESEARCH RESULTS** at **www.cio.com/documents/pdfs/2009_state_of_the_cio_highlights.pdf**.

CIO.com

Efficiency Is the Name of the Game

Due to the economic outlook, cutting IT costs through infrastructure investment and improving end-user productivity dominate your technology priorities now and for the foreseeable future.

WHAT YOU'RE CURRENTLY IMPLEMENTING

Virtual servers	**1**
Virtual storage	**2-tie**
Business process management	**2-tie**
Voice over IP	**3**
Mobile/wireless	**4**
Content/document management	**5-tie**
Customer relationship management	**5-tie**

WHAT YOU'RE ACTIVELY RESEARCHING

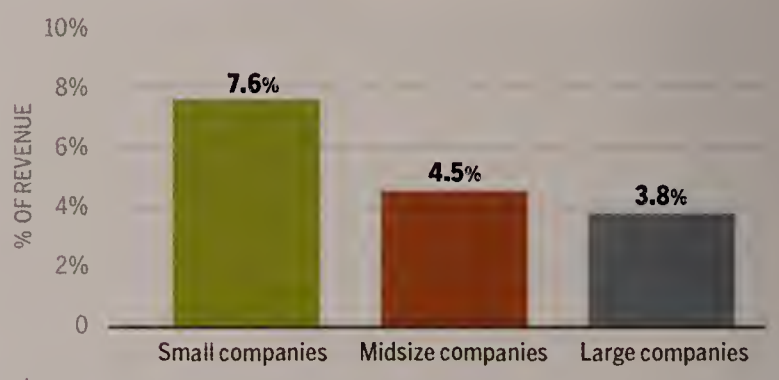
Content/document management	**1**
Collaboration/knowledge management	**2**
Business process management	**3**
Enterprise architecture/service-oriented architecture	**4-tie**
Data loss prevention	**4-tie**
Green IT	**4-tie**
Unified communications	**4-tie**
Identity management	**5-tie**
Mobile/wireless	**5-tie**

Source: CIO Tech Priorities Survey, November 2008

AVERAGE **I.T. SPENDING** AS A PERCENTAGE OF REVENUE

5%

I.T. SPENDING BY COMPANY SIZE



Note: Small=$100 million or less; Midsize=$101 million–$999 million; Large=$1 billion or more

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CHRIS HOWARD

Make Every Dollar Count

Why a recession is a good time to prioritize IT spending choices and lay plans for future growth

Caesar Augustus once chastised generals who rushed into battle: *Festina Lente!* (Make haste slowly!) In these confounding days, with banks collapsing and global markets spinning into oblivion, this admonition is good advice for CIOs. Translated into the realm of enterprise IT management, Caesar is telling us to hold up on projects, IT spending and staffing decisions, avoid knee-jerk reactions and take stock. Acting quickly without sufficient rationale may expend resources in the wrong direction, inhibiting the ability to act when needed.

Even though some organizations will feel greater impact from the tightening economy than others, this is a good time for all to assess IT spending choices. By continuing to invest wisely during a downturn, an organization strengthens its future.

Thanks to virtualization technology and outsourcing, there are easy wins in the data center. Collaboration technologies make it easier to be productive without being colocated. Deep within the IT infrastructure, cost can be contained by reducing the number of moving parts and redundancies. And as people and partners move into, out of and within an organization with greater frequency, well-designed identity management and other security controls for the virtual enterprise add real value.

Careful stewardship over existing assets and frugality concerning new investments are good policies in both weak and strong economic times. Reduced spending doesn't mean that IT has to stand still, but it will force a necessary examination of priorities. Here are some places to get started.

Consider Consolidation

Consolidating across and within data centers tops the list for cost savings. Reducing machines and data centers provides quick, bottom-line benefits. Consolidation usually begins with server virtualization and is now extending to storage virtualization. Outside the data center, it can also be achieved by:

- reducing vendors and suppliers, especially of overlapping technology and services;

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IT Service Management Goes Mobile

Balancing Potential and Risk to Achieve Operational Goals

A new era in computing is dawning, one in which using mobile devices replaces using desktop and laptop computers as the primary way to access data. Indeed, it's already possible to use smartphones to access critical business applications that previously only worked on PCs.

This shift holds particular promise for IT service management (ITSM) applications, where giving IT technicians on-the-go access to help desk applications improves efficiency and frees IT resources for more- strategic business objectives.

"At a time when budgets are slashed and revenue projections are being adjusted, the demand for mobile ITSM solutions is increasing," says a solutions architect in the CTO office of BMC Software, a Houston-based enterprise management software company. "Many customers have already invested in mobile devices, and now is the time to maximize the productivity of employees with those devices."

Increased productivity is just one of the benefits companies expect to reap by mobilizing ITSM, according to a recent survey of CIOs and senior IT executives by IDG Research Services. Although some of the respondents say they are delaying the implementation of mobile ITSM—citing concerns such as security (60 percent), integration (57 percent), cost (51 percent) and reliability (47 percent)—across the board, they are optimistic about the potential benefits. For example, they expect mobile ITSM to lead to better IT support and performance at a lower expense.

More specifically, CIOs say they expect mobilizing ITSM to deliver tactical advantages such as improved response time and productivity (61 percent). By achieving these functional improvements, organizations would be better able to focus on strategic IT and business goals: Respondents say their top ITSM priorities are to improve IT's alignment with business (58 percent) and increase customer service/satisfaction (54 percent).

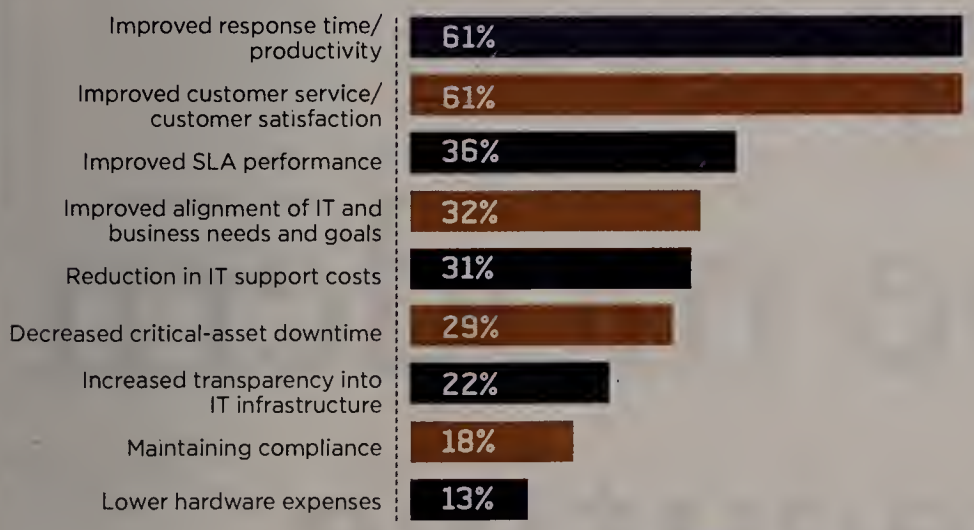
Another area where CIOs and senior IT executives see the potential for strategic advantage from mobile ITSM is the improvement of their IT organization: 52 percent say their organization's current IT service or help desk functions are somewhat or not at all effective. In fact, at enterprises with 500 or more employees, this statistic rises to 57 percent.

It's not surprising, then, that 65 percent of respondents say they are in the process of mobilizing strategic applications—particularly field service, help desk applications and customer service—or plan to do so in the next 12 to 18 months. When asked specifically about using software to mobilize IT service management, 31 percent say they are extremely or very interested and another 43 percent are somewhat interested.

Those organizations that have already mobilized ITSM say they are more likely to achieve multiple service management goals. Indeed, one such company, Lennox International, is seeing lower costs, increased uptime and real-time insight into IT trends.

To read more about Lennox's experience with mobile ITSM as well as the full results of this research study, download the white paper "The Move Toward ITSM Mobilization," at www.cio.com/whitepapers/rim_itsm.

Expected Benefits of Mobilizing ITSM Solutions



Source: IDG Research Services, October 2008

BlackBerry

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- curtailing applications on users' machines, especially those not core to job function;
- renegotiating enterprise agreements with major vendors to trim unnecessary fat;
- reducing redundant data sources;
- performing data de-duplication;
- eliminating business process redundancy.

Consolidation efforts are most effective when undertaken within an overall portfolio management discipline (See, "Bad Times Call For Good Software," Page 26). Portfolio management tracks and assesses existing applications and the demand for new functions, with the goal of rationalizing the set of applications to remove redundancies and maximize value.

Manage Your Data

Most organizations are inundated with data. This exacerbates an already difficult problem: how to manage data and extract meaningful information from it. Users typically find ways around this by generating extracts, massaging data in secondary tools, proliferating copies and sometimes "correcting" the copy so it disagrees with the original.

IT Spending Survey

Read about **BUDGET PRIORITIES** in hard economic times at **www.cio.com/article/458313**.

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Regulatory pressures force retention for compliance purposes, so data deprecation becomes an important consideration that impacts storage requirements. Reducing the number of data sources and de-duplicating the data in those sources will lead to fewer errors, greater efficiency and reduced maintenance costs. Organizations should take advantage of advances in database management systems, which provide extended capabilities for managing and securing data, data analysis and reporting.

Business intelligence (BI) is used to analyze and report on multiple data sources (both data at rest and in motion) to enhance business processes. Effective BI can keep the organization from missing opportunities for business innovation. In the competitive environment that accompanies a constricting economy, BI is a wise investment.

Rent When It Makes Sense

Cost-sensitive organizations are taking a hard look at commodity IT—those functions and capabilities that add no competitive edge or value but cost a lot to maintain. Enter cloud computing and SaaS. The rationale behind cloud computing and SaaS is this: It is cheaper to rent capabilities from a provider than to build and operate them within the enterprise.

As tools to manage dynamic computing in virtual environments improve, there's an expectation that more organizations

The epoxy for the modern IT executive.

Careful stewardship over existing assets and frugality concerning new investments are good policies in both weak and strong economic times.

will begin moving load around within and outside their data centers in response to transaction requirements. Today, only about 35 percent of enterprises use virtualization in production (the usage in test environments is higher), and only a fraction use advanced features like dynamic resource allocation. The benefit of highly dynamic resource allocation is that the organization pays only for what it uses. The more automated this allocation, the more cost-savings can be realized.

Emphasize Business Capabilities

For IT to avoid being seen as an expense, IT staff must be able to advocate for investment in business terms. IT leaders must understand the investment requirements and map them onto required business capabilities.

Business capabilities are also subject to consolidation. The non-technical processes of the business must be rationalized in the same way as the applications and system functions within IT. Over time, redundancies across business capabilities will be introduced. It may not be desirable to consolidate all redundant processes, but some level of normalization will lead to more efficient IT implementation and help cut costs.

Collaborate Without Colocation

New and improved tools for collaboration make it easier to reduce travel. From video conferencing to sophisticated, ubiquitous computing scenarios, users have more options for gathering information virtually without loss of productivity.

Web 2.0 technologies are a great and relatively inexpensive way to encourage collaborative design and brainstorming. They can make it easier to find out who knows what, especially when a team member is trying to solve a tough problem. Blogs and wikis also enhance enterprise knowledge and should be indexed for search.

Remember, collaboration is a human activity. Tools exist to support it, but they will not create value on their own. In your organization, you may need to solve cultural and political issues before collaboration becomes a natural pursuit. CIO

Chris Howard is vice president and service director of the Executive Advisory Program at the Burton Group, an IT research and consulting firm.

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The STATE of the CIO '09

Why It's Time for Us to Refocus

An open letter to CIOs from members of the CIO Executive Council

Dear Colleagues:

The combination of this global economic crisis and seismic shifts in technology has created an unprecedented opportunity for businesses to not only mitigate risk and attain stability but to achieve growth and differentiation.

With our cross-enterprise approach to business information needs and our knowledge about the future direction of technology, CIOs are among the executives best-positioned to lead this opportunity. Using cloud computing tools and new, Web 2.0 resources, we can deliver the resilience, agility and innovation that will propel our companies out of this crisis and well into the next decade.

To succeed, however, CIOs must shift much of their personal focus from the internal—the IT function and its operations—to the external—commercial strategy, customer touch-points and the competitive landscape. These are some of the steps to take now:

- Emphasize your role as an "agent of change" at the executive table.
- Create agile processes and architecture so your business can turn on a dime.
- Look for solutions, ideas and partnerships beyond the traditional boundaries of your organization.
- Tap the emerging resources of the global business community, social networks and consumerized technology.
- Originate commercial product and service ideas by studying market trends and external customer needs. Too many of us undervalue these areas.
- Develop the next generation; bring your senior staff along on this journey.

We, the undersigned CIOs—advisors and members of the CIO Executive Council, urge all IT leaders to make the most of this opportunity in 2009 and beyond—for your enterprise, your profession and yourselves. It's time to step forward as future-state CIOs.

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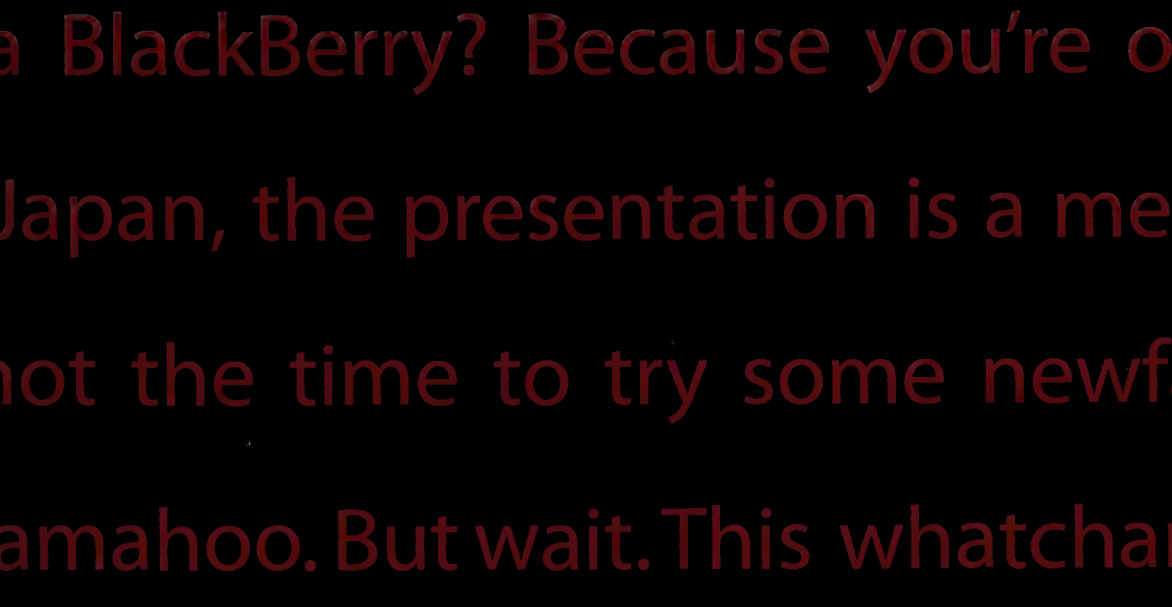

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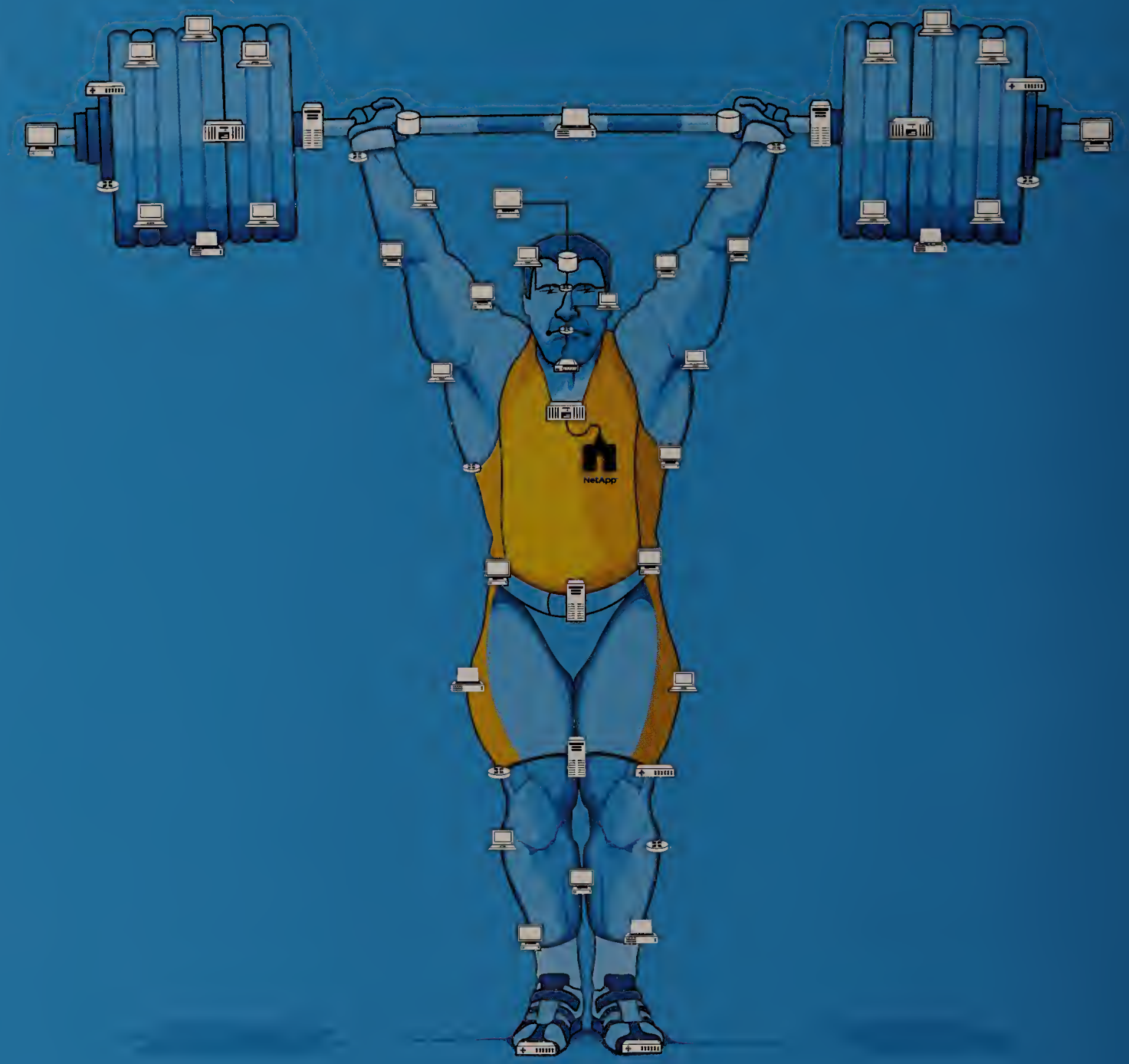

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